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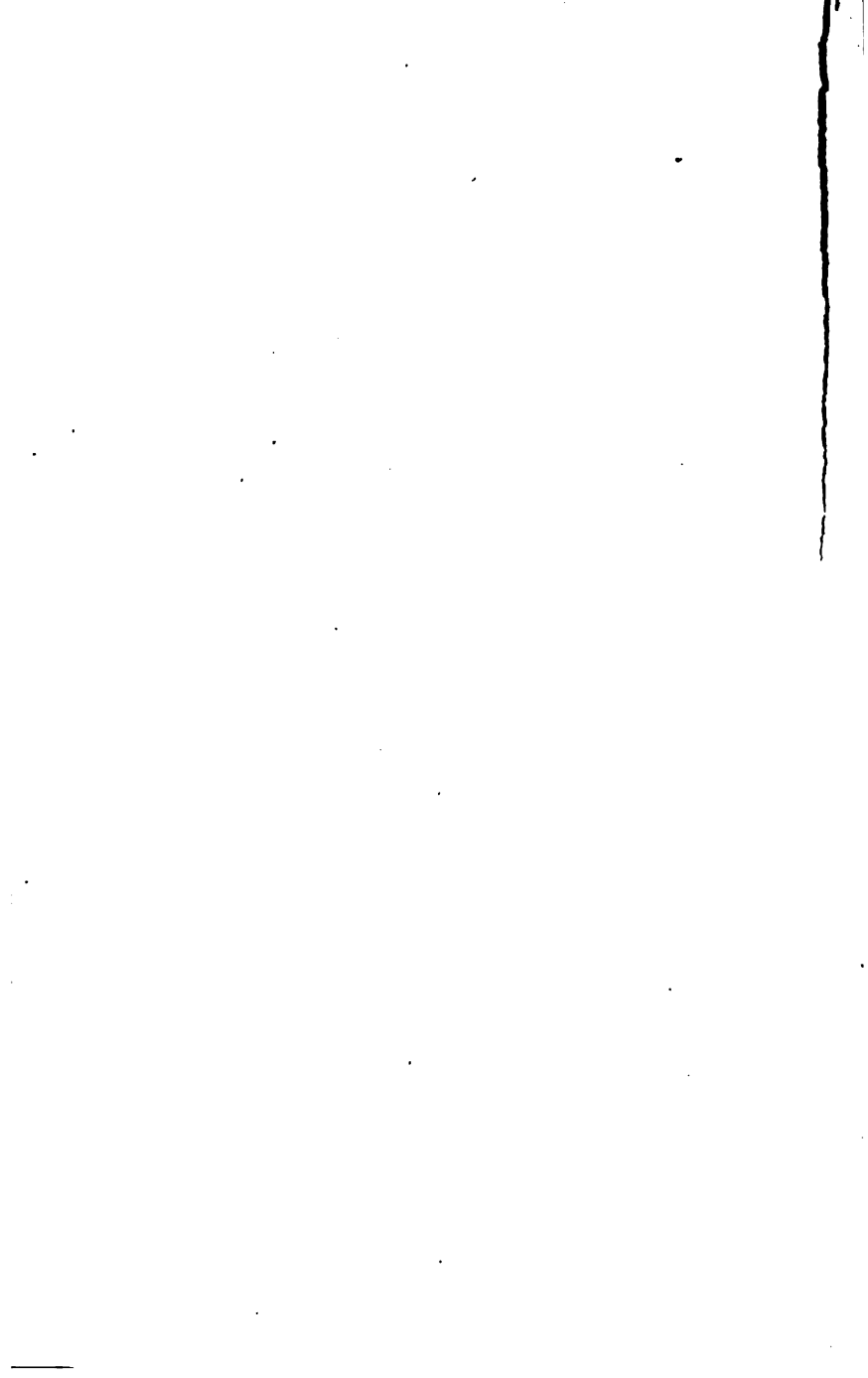
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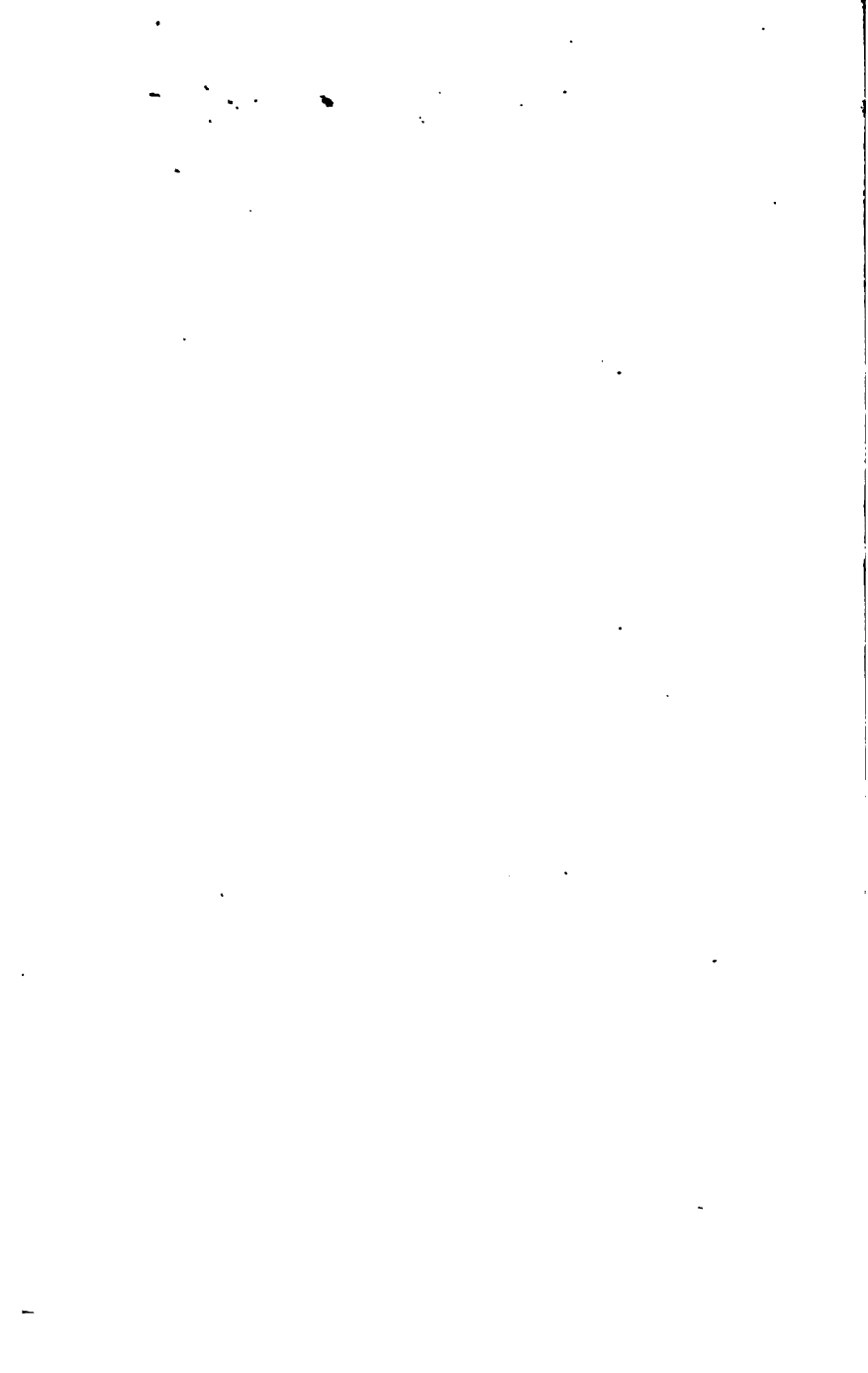
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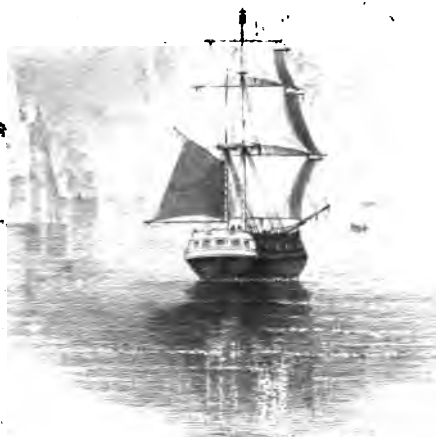
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HENRY SCORESBY D.D. F.R.S.

Henry Scoresby D.D. F.R.S.

Henry Scoresby

LIFE OF
WILLIAM SCORESBY, M.A., D.D., F.R.S., L. & E.



ATMOSPHERICAL PHENOMENON BY

J. WILSON AND SONS

LONDON, EDINBURGH, AND NEW YORK

CHURCH AND
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THE LIFE
OF
WILLIAM SCORESBY,

M.A., D.D., F.R.S.S.L. & E.,

CORRESPONDING MEMBER OF THE INSTITUTE OF FRANCE, ETC.

BY HIS NEPHEW,
R. E. SCORESBY-JACKSON, M.D., F.R.C.S.E.

"They that go down to the sea in ships, that do business in great waters: These see the works of the Lord, and his wonders in the deep."—Ps. ciii. 23, 24.

"And Jesus said unto them, Come ye after me, and I will make you to become fishers of men."
—MARK i. 17.

LONDON:

T. NELSON AND SONS, PATERNOSTER ROW;
EDINBURGH; AND NEW YORK.

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NOV 1964
JUL 1964
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TO THE RIGHT HONOURABLE

THE EARL OF ROSSE, LL.D., K.P.,

EX-PRESIDENT OF THE ROYAL SOCIETY,

ETC., ETC., ETC.,

WHO,

NOT MORE BY HIS DISTINGUISHED SCIENTIFIC ATTAINMENTS THAN BY

HIS DOMESTIC VIRTUES, WON THE HIGHEST ESTEEM OF THE

SUBJECT OF THESE MEMOIRS,

THIS VOLUME IS, BY PERMISSION, RESPECTFULLY DEDICATED,

BY HIS LORDSHIP'S MOST OBEDIENT SERVANT,

The Author.

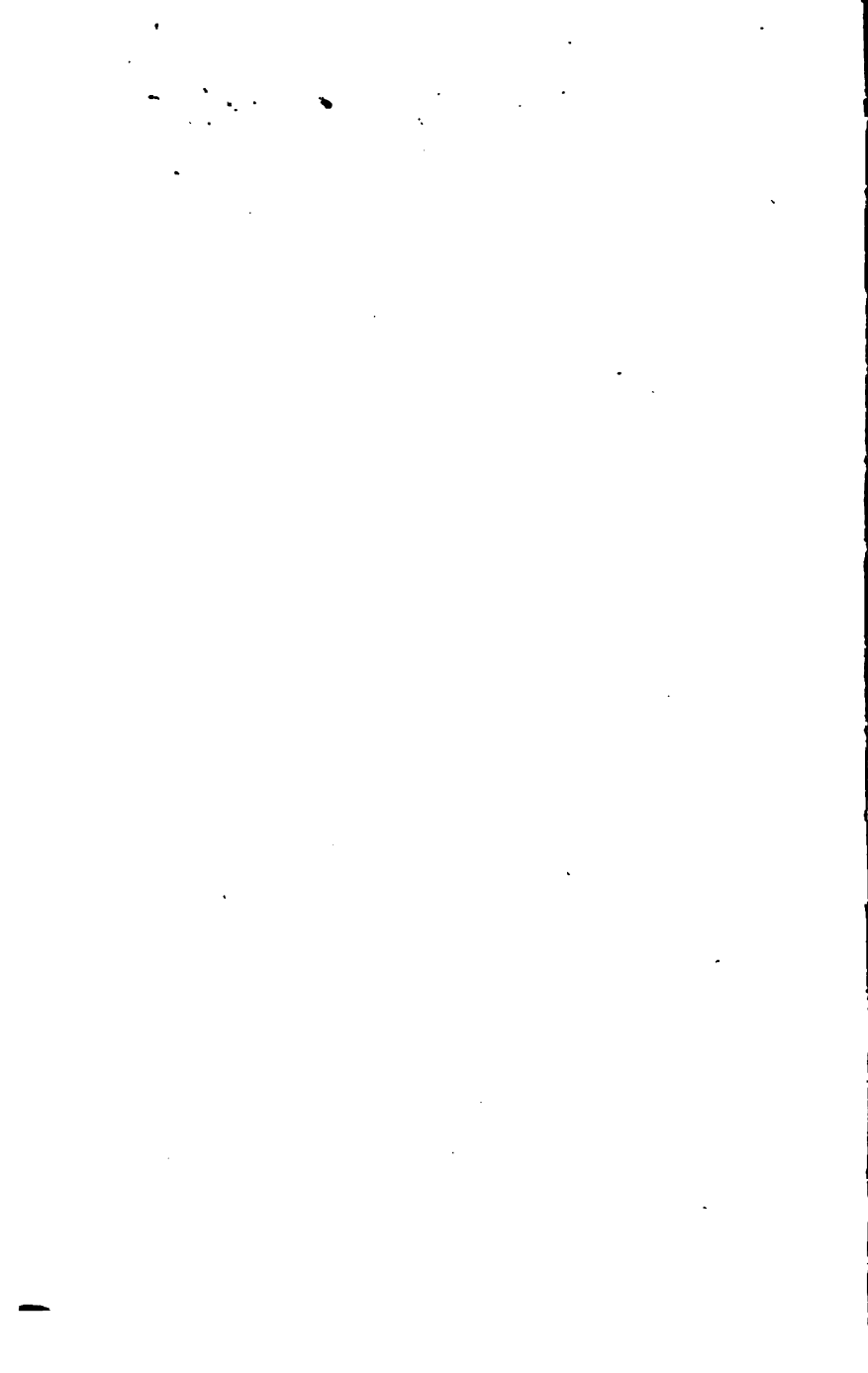
The Author, &c.

PREFACE.

To compress the memoirs of Dr. Scoresby into one volume, and, at the same time, to make that volume generally interesting, appeared on first consideration to be a formidable task. But after a careful examination of the materials available for the work, there seemed to be so many remarkable incidents in each department of his varied life, as to give rise to a hope that a book replete with interest and instruction might be compiled without entering minutely into any one of the particular branches.

Dr. Scoresby has left us a very valuable autobiographical sketch of his early days, written in the Greenland Seas between the years 1821 and 1823. Since that period, however, much of what it contains has appeared in his published works, whilst in some points it is slightly deficient; it has, therefore, been deemed advisable to break it up into fragments, interspersed with brief annotations. And it has been the author's aim to continue the work, as much as possible, in the very words of the subject of the memoirs.

The object of the book is to place concisely before the







From M. G. S. Photograph.

Engraved by J. B. Hunt

REV. W. SCRESBY D.D. F.R.S.

Secretary, S. D. S. Society

Wm. Scresby

LIFE OF
WILLIAM SCORESBY, M.A., D.D., F.R.S.L. & F.



ATMOSPHERICAL PHENOMENON, &c.

T. NELSON AND SONS

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THE NEW YORK AND
HOLLAND INDUSTRY
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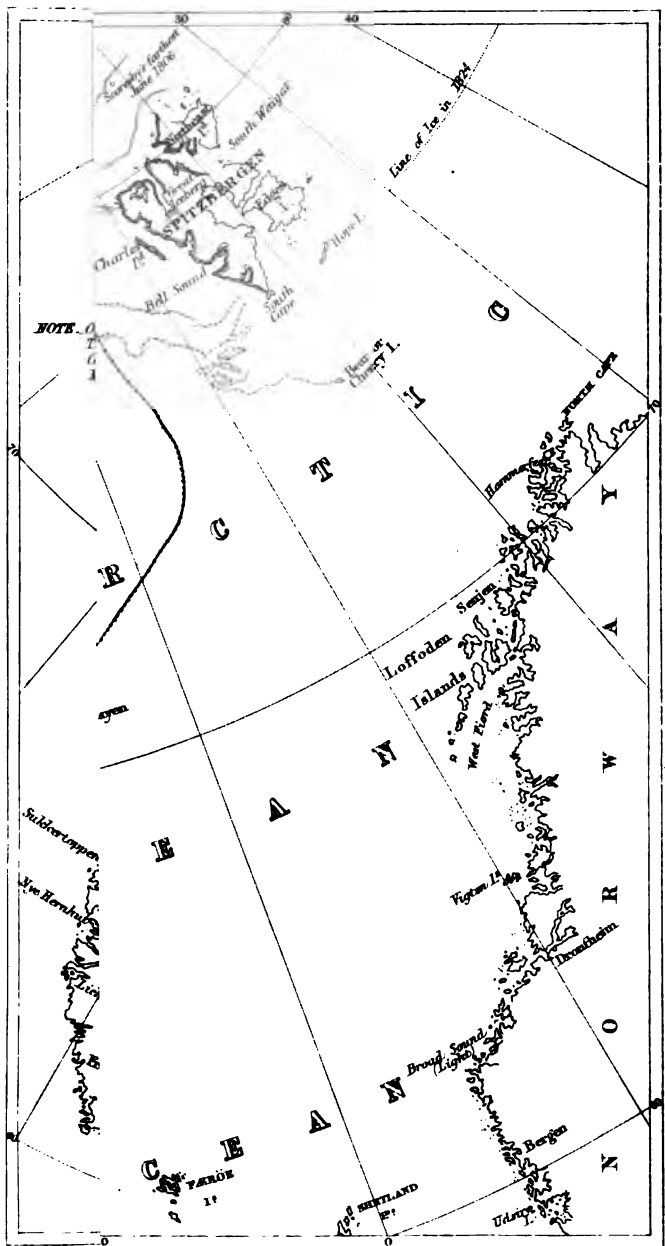
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R. E. SCORESBY-JACKSON, M.D., F.R.C.S.E.

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LIFE OF WILLIAM SCORESBY, D.D.

CHAPTER I.

ANCESTRY—WILLIAM SCORESBY (SENIOR)—HIS EARLY AGRICULTURAL PURSUITS—SEAFARING LIFE—IMPRISONMENT IN SPAIN—GREENLAND TRADE—WILLIAM SCORESBY—EARLY CHILDHOOD—FIRST VOYAGE TO GREENLAND AT THE AGE OF TEN YEARS—ALARMING PROSPECT OF A SEA FIGHT—SCHOOL DAYS.

1789-1802.

THE name of SCORESBY, under various orthographic modifications, but in direct line from the subject of these memoirs, has been traced as far back as the commencement of the fourteenth century. WALTER DE SCOURBY, we are told,* enjoyed the dignity of "bayliffe of York" in the year 1312; again, NICHOLAS DE SCOREBY represented that ancient city in the Parliament of Edward III.; whilst THOMAS SCAWSBY occupied the civic chair in the same city in 1463.

The immediate progenitors of him the story of whose life it is the object of these pages to portray, moved in a humbler walk of life—one only being of a liberal pro-

* Drake's "History of York."

fession, and he was a clergyman. The rest, so far as is known, belonged to the class of yeomen.

WILLIAM SCORESBY, the father of Dr. Scoresby, was born at Cropton, near Whitby, in Yorkshire, on the 3d of May 1760. His parents, who farmed a small estate, counted upon the services of their son to assist in the culture of the land, to which occupation the child at first inclined, and, after a somewhat limited course of education, achieved in a village school, commenced his agricultural pursuits at the tender age of nine years. A laudable desire to fulfil the wishes of his parents kept him in this condition of daily drudgery until he arrived at man's estate, when, being no longer able to restrain his longings after a more active and enterprising avocation, he determined to abandon his uncongenial calling, and push his fortunes in a different sphere. With this view he proceeded to Whitby, the nearest sea-port, where he apprenticed himself to a shipowner, and sailed on his first voyage in April 1780.

Although comparatively advanced in years when he entered the sea service, Scoresby nevertheless acquired with considerable facility the elements of his new profession; and whilst, by a rapid display of seaman-like talent and address, he gained the confidence and esteem of his superiors, he, at the same time, secured, by his good-natured disposition, strengthened by the general aspect of his moral character, the affectionate respect of his mess-mates. He suffered many hardships during the first years of his seafaring life, the most tedious of which was his confinement, as prisoner of war, at St. Lucar la Major, a

small town of Andalusia, whence he effected his escape in a manner bordering upon romance. An anecdote is related in connection with this escape which, since it was the means in a great measure of establishing his reputation as an active, clever, and thoroughly practical sailor, is worth mentioning. After several days of anxious fear, coupled with great fatigue—hiding by day and travelling by night—Mr. Scoresby, accompanied by a fellow-adventurer, arrived, hungry and penniless, on the Spanish shore. Providentially an English vessel, engaged in the exchange of prisoners of war, lay before them, into which, having, by the connivance of the sympathizing crew, contrived to elude the vigilance of the Spanish guard, they effected a safe retreat. When fairly at sea they made their appearance on deck, hoping to satisfy the captain by the offer of their services on the homeward voyage; but, much to their surprise, his anger at their intrusion was not to be appeased, and he even threatened, in a most unfeeling manner, either to return and put them on shore, or to make them over to the first man-of-war that might happen to cross their course. In great trepidation for their safety, they pleaded the hardships they had already endured, and represented their poverty. The captain was inexorable. To the offer of their services he replied, "The crew is sufficient." At length, however, he was moved to the proposition of a mercenary condition, whereby the fugitives were bound, by a written agreement, to pay him most exorbitant passage-money on their arrival in England. The Bay of Biscay turned the tables. A fierce storm having overtaken them, the ship

became unmanageable, and the annihilation of the crew seemed inevitable. The captain in his extremity taunted the two intruders with their heedlessness of the threatening danger, to which they coolly replied that they understood "the crew was sufficient," besides which they were merely "passengers." Quickly the bond was scattered in fragments before the gale; the passengers, by this act converted into ordinary seamen, lent their cheerful aid to the navigating of the ship; their superior talents and ability in seamanship were cordially acknowledged by the admiring crew, as, by their exertions, the vessel was speedily made snug under close-reefed top-sails, and, with her head before the wind, accomplished a quick and prosperous voyage.

By this adventure, Mr. Scoresby appears almost to have acquired a distaste for the sea, and we find he spent the years 1783 and 1784 in the peaceful retreat of his native village. During this period he married, his choice having fallen upon the eldest daughter of Mr. John Smith, a landed proprietor in a small way, a native of Cropton. His desire for active service, however, speedily revived; but the ordinary voyages for international commerce not having proved altogether congenial to his spirit of enterprise, he determined to enter upon a more hazardous employment, and with this view selected the Greenland trade.

It is difficult, even impossible, to state with authority who were the originators of that trade which, at the period when Mr. Scoresby entered upon it, was yielding so large a return for the capital employed by this country

in its prosecution. To his translation of Orosius, Alfred the Great supplemented an account of a voyage by Ohthere, a wealthy native of Helgoland, who, from motives of curiosity, visited that part in the north where the Norwegians were then in the habit of *seal*-fishing; he speaks, however, of a *whale*-fishery, and describes the magnitude of the object of their pursuit, in the capture of which he himself successfully joined. The description of this voyage, which occurred in 890, is probably the first reliable account of such a fishery. The Biscayans have generally enjoyed the reputation of being the early founders of this important trade; and undoubtedly they prosecuted it with great vigour and enterprise so far back as the middle of the sixteenth century, and were in subsequent years much in request among speculators from other nations, in whose vessels they held most important offices. The precise period at which England entered upon the whale-fishery is not authenticated. Some of the smaller species of whales, together with the walrus and seal, formed the object of a fishery in the neighbourhood of North Cape and Cherie Island, about the end of the sixteenth century, at a time when the Russia and East India Companies were sending frequent discovery ships in the same direction. In following up the retreat of these creatures, their pursuers were drawn towards the coast of Spitzbergen, soon after its re-discovery by Hudson in 1607, where, falling into the habitat of the larger whales, they relinquished their former pursuits, and attacked the more important prey. Expeditions were sent out by the Russia Company con-

jointly with the East India Company, with, at first, but indifferent success. In these the Biscayans were extensively employed as essential to the prosperity of the fishery. The Russia Company disputed the right of the Dutch and Spaniards, who quickly followed their steps in the enterprise, to participate in that trade which they had established at an immense cost. They equally disputed the right of the French and Danes. Having, in 1613, obtained, by royal charter, a right to monopolize the trade, they protected their rights by an armed fleet, and drove all intruders off the grounds, not even permitting their own countrymen to enjoy the privilege of fishing. In 1618 the Dutch also entered the field with a naval armament, and successfully contested the monopoly, in which great mischief befell the English fleet. Perceiving the evil effects of these serious contentions, an agreement was made whereby the vast fishing station was divided amongst the contending powers, the English obtaining the first choice of position, and after them the Dutch, the Danes, the Hamburgers, and the Biscayans. Whilst the Dutch, however, continued yearly to improve their fishery, and carried it on with singular energy and enterprise, the English gradually lost ground, so much so that in 1619 the Russia Company withdrew from it. A few individual members carried on the trade until 1623, when, from indifferent success, they too abandoned it. The royal charter was renewed to the Russia Company in 1635 by Charles I., but they did not avail themselves of it. In 1672 the government made an effort to rouse the trade by allowing the importation of

Greenland produce free of duty, as well as other boons, but still it did not thrive. Towards the end of the seventeenth century, a joint-stock company entered into the trade, but, after spending £82,000, they gave it up.* In 1725 the South Sea Company entered into the speculation, but, after eight years of unprofitable enterprise, they left it. In 1733 the government of this country made another and at length a successful attempt to revive the trade, by adding to other privileges already offered a bounty on the tonnage of the vessels employed, at the rate of 20 shillings per ton. By this means the trade increased a little; but still, not being in a very thriving condition, the bounty was, at the end of seven years, increased to 30 shillings, and again, in 1749, to £2, whereby the trade was so fully established, that the government was able without injury to withdraw the bounty gradually, until but 20 shillings per ton remained at the period of which we now write. Whitby ships were first employed in 1753, from which time the numbers gradually increased from season to season, until, in 1786 and the two subsequent years, no less than twenty vessels were annually despatched from that port. Mr. Scoresby made his first trial in the ship *Henrietta*, on her voyage to Greenland in 1785.

His future brilliant successes in this employment were well earned by the toil which he underwent during the

* "About the time that the English joint-stock company sunk a capital of £82,000, the Dutch, in the course of ten years, included between 1699 and 1708, equipped 1652 ships, which caught 8537 whales, the produce whereof sold for 26,885,120 florins, of which the sum of 4,727,120 florins was clear gain."—*Arctic Regions*, vol. ii. p. 105.

years of his servitude. "Marrying," says his son,* "before he was well able to support a wife, he was occasionally subjected to considerable inconvenience, and it was not until after he was appointed to the command of a whale-fishing ship—the *Henrietta* of Whitby, in the year 1791—that he was relieved from the occasional embarrassments incident to a precarious and not very profitable profession. I have heard him say that in the six years' training which he underwent in the Greenland services—during which period he acted as seaman, boat-steerer, harpooneer, &c.,—the amount of receipts for the whole of the voyages was only £60 ! and out of this sum chiefly he had to support a wife and family increasing to three children."

WILLIAM SCORESBY, the subject of these memoirs, was the third of the children here referred to. He was born on the 5th of October, 1789, just two years before his father attained that position in his profession whereby he was raised above the importunities of a straitened income. Of his earliest years nothing is recorded of importance. Physically, he was tall, weak, and delicate in constitution; mentally, he was timid, anxious, and scrupulously conscientious. He was blessed with a mother of eminent piety, who desired for her children the inheritance of the riches of the abiding pleasantness and peace of true religion. Her counsels, which, like bread cast upon the waters, were to be found after many days, produced a lasting impression on William's susceptible mind; but

* MS. Autobiography.

though their influence was in a manner persistent, they served only at the time as incentives to a stricter observance of those outward forms and ceremonies which he subsequently learned to regard as the mere *sentimentalism* of religion. Referring to this period, he says : * —

“ My veneration for the Sabbath was such, that I not only declined play, but even scarcely dared to pick up any trifling article that I might happen to find without an owner on the street or field on that day, and was not a little surprised at greater boys than myself appropriating them to their own use as soon as ever they discovered them. I recollect one Sunday having found a penknife with six blades, quite new, and to me a great treasure. No owner appearing to claim it, I was tempted to pick it up. After carrying it about me a week, being no longer able to bear the pain of conscience it gave me, I threw it into the river near to the place where I found it. I also recollect on another occasion, when proceeding to purchase some trifling article at a country house where it was wont to be kept for sale, I asked some boys whom I met by the way whether there was any to be got. They declared it was all sold, they themselves having purchased the last. I advanced, however, to make personal inquiry at the house, and found to my astonishment that the boys had told me a wilful untruth. The remark I made on the occasion was expressive of the abhorrence I felt at such *great* boys telling lies ; and I was greatly astonished that they should so wantonly sport with the favour of the

* MS. Autobiography.

Almighty, who, I was taught to believe, would not love a liar. These impressions, however, I found from later experience were merely the effects of education and of a tender natural conscience, for they grew weaker and weaker as I began to see more of life, and to associate with persons less scrupulous than myself."

The mere rudiments of learning he acquired from "an elderly dame of mild and amiable manners;" but so soon as he was of an age to enter upon the usual course of education, he was removed to a boys' school, where he was *terrified* by the severity of the discipline under which the pupils were taught. Speaking of the school-master, he says : *—

"He not only had recourse to the ordinary means of punishment, such as the cane or the ferule—both of which he was in the habit of applying with terror-awakening dexterity, and they were of unusual magnitude,—but he also was in the habit of locking the offending boys in the school, and keeping them several hours in darkness after the rest of the scholars had departed—of strapping the little culprits to a bench, and keeping them immovably fixed for half a day together—and, at other times, of fastening a cord to their thumbs, an inquisition-like torture, and then passing it through a pulley above them, hoisted them up so as to leave only their toes on the ground. In this cruel posture, with their arms above their heads, and with their thumbs almost disjointed, he

* MS. Autobiography.

was known to detain those who seriously offended him during the absence of the school at dinner!"

The routine of his scholastic duties received its first interruption in the spring of 1800, when he was only ten years of age, in rather a singular manner. His father commanded the *Henrietta* from 1791 to 1797 inclusive, but in the latter year circumstances arose out of which it resulted that Captain Scoresby, having resigned his command of this vessel, undertook the charge of a ship sailing from the Thames—the *Dundee* of London. In the voyage of 1800—the third of his new command—he called in "Whitby Roads" as usual for the purpose of taking leave of his wife and family, who still continued to reside in that port. On this occasion, William accepted his father's invitation to visit the vessel during her stay in the *roads*, designing to return to shore with the pilot. Delighted and excited by the novelties which met his gaze at every turn, he quickly conceived the idea of *going the voyage*, and in order to test the practicability of his designs he hid himself at the time when the pilot was anxious to depart. There was no response to the cry for "Master William," until at length a peremptory call brought the little fellow to the top of the *companion*, where he stood bare-headed, leaving it to those who might observe the circumstance to infer the impossibility of leaving the vessel without his hat, which they were at liberty to imagine he had lost. His father, perceiving the drift of the device, resolved to take him with him to Greenland; and the sailors, having been furnished with

the necessary materials by the captain, soon equipped "Master William" with a complete wardrobe. A circumstance occurred a few days after leaving the roads which I give in his own words : *—

"My joy at finding myself at sea received a solemnizing influence two or three days after sailing. The weather being fine, with a brisk and favourable wind, and the ship going steadily and swiftly under her ample and well-trimmed sails, all hands were set to work, my father superintending, in clearing the 'tween decks of a variety of stores hastily taken in, and confusedly scattered about, in order to make all snug and secure for the North Sea passage. So much were all hands—men and officers—occupied by this important labour of clearance and order, that, somehow or other, the 'look out' had been for a while neglected, when suddenly it was announced by a voice calling out from the deck at one of the hatchways, 'A ship bearing down close upon us!'

"It being a time of war, and the North Sea abounding with ships of war and privateers of the enemy, the announcement produced an instant suspension of the work going on, and drew universal attention to a circumstance which might possibly involve the safety of life and property in the ship.

"My father's quick eye and sure telescopic glance discovered at once the characteristic marks of an enemy and

* *Vide* "My Father: being Records of the Adventurous Life of William Scoresby, Esq." By his Son, the Rev. William Scoresby, D.D., F.R.S.S.L. and E. London: Longman & Co.

vessel of war. She was bearing down, steering easterly, exactly so as to intercept our track, but not on any of the courses usually steered either for England, France, or Denmark. Already she had approached within little more than a mile of our position, and so that in about a quarter of an hour we must be within hailing distance.

“With the promptness and coolness characteristic of the *Dundee’s* commander, measures for self-defence and skilful strategy were arranged, and progress commenced. These measures, I conceive, are worthy of some particular notice.

“Fortunately, had the extremity required, he was in a position calculated for a brave defence. The *Dundee* was as well armed as she was well manned, carrying twelve guns, eighteen-pounders, I believe, with a crew of betwixt fifty and sixty men. The guns were already loaded, and in every way fit for immediate service.

“The strategy in this case contemplated, was to give to the threatening assailant the surprise of a concealed armament, and the impression as of a designed deception in the class of ship assumed.

“And fortunate it was that there were circumstances connected with the qualifications of the crew, and the construction of the ship, admirably adapted for the experiment proposed. For, contemplating such a risk as that now threatening him, my father had selected, out of the variety of hands offering themselves for the voyage, two men of rather unusual qualifications,—one who was an adept in beating the drum, the other ‘in winding a boatswain’s call.’ These qualities, amongst seafaring

men, being almost peculiar to classes employed in vessels of war, induced a preference, in respect to them, over others, though the drummer might by no means be equal to some who were rejected, in regard to general seaman-like attainments.

“The construction of the ship, too, was well adapted for the execution of the proposed surprise, being ‘deep-waisted,’ with a high quarter-deck, and having her guns entirely below, with no outward indication, at a distance, of either ports or armament.

“On the first alarm the hands, with one accord, had begun to swarm upon the deck, but their retirement was promptly commanded. The men required for the guns were sent to their quarters, with orders to make all ready for action, but to lift no port. The hands above, whilst requiring to move about, were kept as much as possible on the lee-side of the deck, where, from the heeling of the ship and the enemy’s windward position, they were in sufficient concealment. The *drummer* and *boatswain*, now most important elements in the plan, had their special instructions; whilst the crew thus became generally sensible, by means of the orders given, of the ingenious device of their commander, so as to be well prepared to give to it its utmost impression.

“Short as the time was,—the coolness of the commander being communicated to the men, so as to relieve the urgent haste from any embarrassing confusion,—all arrangements had been completed before the enemy came within hailing distance. At that period (as *apparently* from the first) everything visible on board the *Dundee* indicated

an unconcerned quietness, and utter unconsciousness of danger from the stranger's approach. The men on deck were laid down flat on their faces. My father coolly walking the quarter-deck, and the helmsman engaged in his office of steering, were the only living beings who could be discerned from the deck of the assailant.

"Without showing any colours in answer to our English ensign waving at the mizzen-peak, the stranger came down to within short musket-shot distance, when a loud and unintelligible roar of the captain, through his speaking-trumpet, indicated the usual demands of the nation or denomination of our ship. A significant wave of my father's hand served instead of a reply. The drum beats to quarters, and while the roll yet reverberates around, the shrill sound of the boatswain's pipe is heard above all. And whilst the hoarse voice of this officer is yet giving forth the consequent orders, the apparently plain sides of the ship become suddenly pierced; six ports on a side are simultaneously raised, and as many untomponed cannon, threatening a more serious bellowing than that of the now astonished captain's trumpet-aided voice, are run out, pointing ominously towards the enemy's broadside.

"The stratagem was complete; its impression quite perfect. The adversary seemed electrified. Men on the enemy's deck, some with lighted matches in their hands, and plainly visible to us by reason of her heeling position whilst descending obliquely from the windward, were seen to fall flat, as if prostrated by our shot; the guns, pointed threateningly at us, remained silent; the helm flew to port, and the yards to the wind, on our opposite

tack; and without waiting for an answer to his summons, or venturing to renew his attempt on such a formidable looking opponent, he suddenly hauled off, under full sail, in a direction differing, by some six points, from that in which he had previously intercepted our track!

“During the interval of suspense, I was in a condition of strange perplexity and excitement, in being so suddenly and unexpectedly thrown from the singularly unadventurous life of a school-boy, into that of a threatened participator in the perils of deadly conflict in actual warfare! The danger passed, however, I enjoyed the voyage exceedingly; and, not being subject to sea-sickness,—the bane of most young adventurers,—I experienced little of what I conceived to be hardship, and was in general not only contented with my situation, but lively, active, and happy.”

Captain Scoresby, on contemplating the risk to which he was about to expose his child by conveying him to Greenland at so early an age, entertained the idea of leaving him in Shetland until his return; and with this intent arranged for his accommodation in a school at Lerwick. This design, though covertly planned, was frustrated by the boy's intelligence; for, perceiving that preparations were being effected for the speedy departure of the vessel, he chartered a boat at an extravagant price and reached the ship just as she was leaving the harbour. By this voyage his health was neither promoted nor injured, and, with the exception of some little knowledge which he acquired in marine tactics, it was probably altogether unprofitable.

During the half-dozen years following, William was kept almost constantly at school, where he made progress so rapidly as quite to have exhausted the learning of his teachers in Whitby. His last year of regular scholastic exercise was more advantageously employed. He says: *—

“In the autumn of 1802, my father having called in Whitby Roads on his homeward voyage, I accompanied my mother on board the *Dundee*, and again visited the metropolis. Soon after my arrival,—the ship lying in Blackwall Dock,—I was put to an excellent school in the neighbourhood, superintended by Mr. Stock. This was the first instance in which my faculties were brought into exercise. Mr. Stock was a rigid disciplinarian, but a teacher of the first order. His system, which was founded on emulation and the distribution of rewards, the result of small subscriptions and fines, possessed a stimulus which awakened the energies of the most unambitious; and his plans being uniform and methodical, and ably supported and enforced by his numerous assistants, the result in many instances was most brilliant. For my own part, the advantage I gained was incalculable. In grammar I attained uncommon proficiency; in calculation much facility; in writing much improvement. On the first weekly examination of exercise copies I was almost at the bottom of the list, my number being below seventy: at the conclusion of a quarter of a year I stood number two. In the exercises for calculation—and in the division of the

* MS. Autobiography.

weekly funds—I gained many prizes. The exertion, however, on a delicate frame was severe. I had to rise at five in the morning and to pursue the routine of the seminary until the same hour in the evening, with the usual intervals for refreshment, after which, I never failed to have some exercise for my employment at home; and sometimes, which was optional, attended the familiar lectures of Mr. Stock, on interesting branches of science, in the evening.”

CHAPTER II.

APPRENTICE WITH HIS FATHER—ADVANCED TO THE RANK OF CHIEF OFFICER
—HIGH LATITUDE—A SAILOR'S "PRIVILEGE" AND "CONSOLATION"—
FIRST SESSION AT THE UNIVERSITY OF EDINBURGH—SURVEYS.

1803-1807.

IN the year 1803, Captain Scoresby changed from the *Dundee* to the *Resolution*, a Whitby ship, and thus again enjoyed the opportunity of sailing from the port where his family was stationed. Desirous of training his son to the profession in which he had himself experienced remarkable success, he made him, from this date, the constant companion of his voyages. William, though still very young, manifested considerable skill and aptitude for his calling, and on several occasions, even in this his first voyage in the capacity of apprentice, made hazardous personal attempts at the capture of the mighty leviathan. Nothing of interest occurred during the three following years; 1806 was an eventful year in his life. Although not more than sixteen years of age, he was deemed equal to the duties of a chief officer, and in this honourable capacity he sailed, still under his father's command, in the month of April. In commercial interest this voyage was equally successful with the rest; in other circumstances it was still more remarkable. Let us review them.

Many years subsequent to this date, in a letter to Mr.

Scoresby—as we shall now designate the subject of these memoirs, to distinguish him from his father, Captain Scoresby—Captain Basil Hall remarked, after inquiring the project of his voyage, “I trust you mean to attempt the pole; it will immortalize you, and very deservedly so.” Mr. Scoresby was never nearer accomplishing the pole than in his voyage of 1806. It was a voyage which, for the display of consummate skill, ingenuity, and boldness of enterprise, could scarcely be excelled by a private undertaking. The approach to the ordinary fishing-grounds was on this occasion occupied by ice of extraordinary density; but the *Resolution* was forced through it, and speedily left the rest of the whaling fleet behind her. Whilst occupying a position in parallel $78^{\circ} 46'$, it occurred to Captain Scoresby to push further forward towards the north, under the belief that an open sea existed nearer the pole; but the compact and apparently impenetrable state of the ice rendered this a difficult and hazardous undertaking; for not only was there the risk of not attaining the supposed sea, but also the danger of being cut off in the rear. The energies of the crew were taxed to their utmost; every device which the fertile genius of the captain could suggest was brought to bear upon the progress of the ship, and in the end their efforts were crowned with success. Mr. Scoresby says: *—

“After passing an icy barrier of extraordinary tenaciousness and compactness, we reached a region in the 80th parallel, of incomparably greater openness than we

* MS. Autobiography. See also “My Father,” p. 152, *et seq.*

could have anticipated—'a sea of water,' to which we could see no bounds but the ice we had passed through on the south side, and the land to the eastward." Again he says, this region, "as far as conclusive records go, has not, before or since, been *navigated*.* . . . We continued our progress until we had reached the longitude of 19° east, when our latitude, as estimated from the recent observation, was 81° 30' north. This was our furthest advance northward, in which we had gained a position within about five hundred and ten miles of the pole. Even then the navigation was still quite open to the E.N.E. (true), and from that point round to the southeast, so open that, as we could certainly gather from the appearance of the sky, we could have easily advanced many, many leagues further in the direction we had so extensively pursued.

"Our situation, at our furthest advance, was singular and solitary indeed. No ship, no human being, it was believed, was within three hundred or three hundred and fifty miles of us. Unquestionably the crew of the *Resolution* now occupied the most northern position of any individuals in the world. The sea began to freeze, and threatened our detention."

A second circumstance of interest which occurred during this year was his first interview with the lady who afterwards became his wife. In relating this incident, he says :†—

* Captain Parry went seventy or eighty miles beyond this in his journey across the ice in 1827. The above account bears reference to *sailing*.—"My Father," p. 162.

† MS. Autobiography.

“There is no class of men that enjoys and appreciates so much the society of the softer sex as sailors. Deprived of all intercourse with females for perhaps half their lives, they esteem the enjoyment a privilege, and value it as a benefit. This is the sailor’s consolation under all his privations ; he anticipates the hour that shall restore him to the society of that sex whose prerogative it is to lessen and soothe the cares and anxieties of life, and to bestow happiness in the midst of natural evils, which, while it affords a stimulus to the exercise of manly exertions, gives refinement to our manners, delicacy to our sensibilities, and exercise to our best affections. Even at this age I was not insensible to the charms of female society ; I sought it, and, where I found along with it refinement, frankness, and amiability, I greatly enjoyed it.”

A third occurrence which tended to render this a memorable year was the commencement of his studies at the University of Edinburgh, of which he gives the following narrative :—

“After I left Mr. Stock’s admirable academy in 1802, no opportunity was afforded me of improving myself in scholastic knowledge, excepting what little was within my reach at the school in Whitby, conducted by Mr. Routh. Here, in the intervals of the fishery, I attended to geometry (plain and spherical), algebra, navigation, and other branches of mathematics ; but having, in every branch, run the teachers beyond their usual practice,

I found their explanations of any difficulties that occurred neither satisfactory nor intelligible. Hence, what I learned perfectly was merely the rudiments of each division of the science. In the classics I had a better chance, had I had the taste, having a tolerably skilful tutor of the literary class; but this study was to me complete drudgery, and I made no progress excepting in the first two or three books usually employed in teaching Latin. Drawing and music I was better pleased with, and made some progress in both, as well as in several mechanical arts; but imagining I had no genius for painting, I did not persevere in it.

"In justice, as well as praise of my father, I must not omit to observe, that he always evinced the greatest desire for my obtaining information in every kind of useful knowledge. And it was only the want of suitable establishments in the neighbourhood that prevented my having the benefit of the best education. My father spared no expense; nor did he spare any pains to urge me to get information of every description. If I asked what use it could be to learn such an art, he would answer, 'No one can tell whether it may not hereafter be useful—besides, *learning is never a burthen.*' This principle, indeed, he carried so far, that he would have me taught to beat the drum, believing that this noisy instrument, sounded in a warlike manner, might be efficacious in alarming an enemy in case of an attack at sea; as such, I was ordered to attend the instruction of a *bombadier* for some time during the winter; but my fingers being daily starved and severely blistered, I,

against all authority, abandoned the uncongenial pursuit.

“Towards the close of the autumn of this year (1806), a school-fellow of mine made preparation for a journey to Edinburgh, with a view of studying physic. Stimulated by this example, I became desirous of attending some university, for the purpose of acquiring that knowledge which I in vain sought for at home. Encouraged by my father’s usual wishes with regard to my improvement, I wrote to him (he being then in London), requesting his permission, and the grant of supplies, for me to accompany my friend to college. My father did not immediately answer my letter, and the time for the opening of the session was at hand; presuming upon his concurrence, I, therefore, set out on my journey, supporting myself, in the first instance, with a small sum of money I saved from the bonuses of my voyages, &c., and afterwards, having received his approbation to the step, I also was furnished with ample means for rendering the visit comfortable and profitable.

“A youth of seventeen entering the university of Edinburgh, where such numerous subjects for study present themselves, and all alike attainable, without a friend to direct his studies, or any particular object to assist his choice, must necessarily be liable to make a selection far from judicious. But I was, perhaps, more than commonly fortunate; the classes I attended being chemistry (Dr. Hope, professor), natural philosophy (Professor Playfair), with occasional lectures on anatomy, and a French school. I was strongly impressed, by what

means I do not recollect, that most young students committed an error in attending too many classes at once, which not only rendered the pursuit extremely laborious, but created such confusion in running from one room immediately to another, and from one subject to another, that nothing was learnt effectually. This error I avoided, and, under the eminent teachers I attended, so strengthened and improved the bias of my mind for philosophical pursuits, that the taste continued ever after to increase.

“In Edinburgh I was an entire stranger—and as strangers, not introduced, are received with extreme caution by the inhabitants, I formed very few acquaintances. My extreme diffidence, amounting, indeed, to bashfulness, made me rather avoid than court society. This arose, partly, from the want of mixing more with mankind, but more particularly from a most humiliating sensibility to my own deficiencies. There was a family, however, resident at Leith, who, from being in the habit of transacting commercial concerns with my father, I was desired to call upon; from them—Messrs. P. and C. Wood—I received the most gratifying civilities. I dined with Mr Peter Wood at least once a week, and received a general invitation to be a guest at his table. The innumerable marks of kindness experienced under his roof were truly parental.

“On one occasion I was invited to breakfast with Professor Playfair. His modest, affable, and unassuming manners gave me much encouragement, and induced me to venture on some observations on the peculiarities of

the polar seas, which so far excited his attention as to lead to a future correspondence.

"The season passed away happily and rapidly. I took full notes of both classes I attended in the university, and on my return to my lodgings extended them. I wrote partly in short hand—an art in which I was self-taught—and, more frequently, in an abridged running hand. A prominent word or two in a sentence was generally sufficient to recall it to memory; and proper names and figures being always put down, brought with the review of them the associations which had previously been connected with them. Thus I found my notes daily extend, until at length the writing of them out used to occupy me three or four hours. By this exercise each subject was more particularly fixed on my memory than it could have been by an extensive course of reading—an employment to which I felt considerable aversion—and I was necessarily led, at the same time, into habits of composition; for, although I often took down the words of the lecturer, yet more frequently the ideas only were preserved.

"In my fellow-student, whom I accompanied from Whitby (Mr. John Mewburn), I had an agreeable and intelligent companion; but, as his object in attending the lectures was for a profession, mine merely for improvement, we had few subjects of mutual interest on which to converse.

"The whale-fishery, to which I was training up as an occupation, called me away, greatly to my regret, in the middle of March, two months previous to the conclusion of the session, and just when Professor Playfair was

entering on astronomy—a subject which, to me, had uncommon attractions. The mandate of my father, however, was peremptory, and I reluctantly quitted my liberal pursuit for the hardy and unrefined duties of chief officer of a Greenland ship.”

In the progress of this voyage, whilst the vessel was delayed in Balta Sound, Mr. Scoresby employed his time in “making a survey of the harbour, of which there was no chart, and in drawing up directions for the navigation.” “The original map,” he continues,* “and six views of the land, with observations on Brassa Sound, Lerwick, Balta Sound, and the Zetland Islands in general, I inserted in my journal of this voyage. This survey I accomplished by means of an azimuth compass, quadrant, and Gunter’s chain. I afterwards proved it by means of a theodolite, but found it so accurate that I could make no alteration in it. The extent of coast which I traced and trigonometrically examined was fifteen miles. This voyage proved as prosperous as we could have desired. We procured thirteen very large whales, two and a half of which were in excess of the capacity of our casks, and were taken home in bulk.”

A singular change in the order of his occupation occurred after his return from this voyage, the circumstances of which appear to be, in their kind, so generally interesting as to warrant the insertion of the episode in its original terms.

* MS. Autobiography.

CHAPTER III.

STORY OF HIS VOYAGE TO COPENHAGEN.

1807.

A CURSORY review of the state of Europe in the summer of 1807 will form a necessary prelude to the narrative we are about to relate. Passing over the shocking details of Eylau, Heilsberg, and the memorable battle of Friedland, let us hasten to the consideration of the events which followed these sanguinary conflicts. Harassed by the long and active campaigns which he had sustained almost single-handed against Napoleon, Alexander was compelled, after his retreat from Friedland, to propose a cessation of hostilities, on the banks of the Niemen. His army had performed prodigies of valour, and, although forced to retreat, it fell back in consummate order, and with a bold front towards the enemy. Prussia, lying prostrate beneath the incubus of a foreign army, spread throughout the length and breadth of her dominions, could afford but little assistance to her ally. Austria stood aloof; and Great Britain, through the saving policy of her government, neglected the opportunity when her arms might have struck a decisive blow in behoof of European liberty. Before the successors of this government could administer to the necessities of the allied armies, the opportunity had vanished. Whilst Napoleon

was luxuriating in the rich produce of the German States, and maintaining his army by imposts on his newly acquired territories, Alexander had been supporting his forces solely at the expense of the imperial exchequer; and so great was his chagrin at the persistence of these disadvantages, that on the banks of the Niemen he was induced to sheathe his sword, and tender the hand of friendship to his foe. Napoleon rejoiced at the opportunity thus afforded of a friendly intrigue with Russia. The emperors met upon "the raft of Tilsit" on the 26th of June; in two hours the basis of a treaty was agreed upon, in a few days it was ratified—Frederick of Prussia, as if in hollow mockery of his misfortunes, completing the triumvirate. From this treaty Prussia emerged the shadow of her former self; but, though deprived of half, and crippled in the rest of her possessions, she still maintained a noble bearing in the midst of her distress. The mightier powers, however, were united by a stronger bond—a common hatred of Great Britain. Jealous of her maritime power, they effected a second treaty, to which their impotent ally was not invited. The "secret treaty of Tilsit," by turning the full tide of continental war against Great Britain, aimed at the destruction of her commerce and the annihilation of her navy. Sweden, Denmark, and Portugal were to be pressed into the service, and the combined fleets of the two latter were designed to form part of the naval coalition against this country. Gustavus of Sweden—aided by the British forces, proceeding, at too late an hour, to the assistance of Russia and Prussia—made a bold stand against the haughty

dictates of Napoleon; but in the end was obliged to retreat, though he never succumbed. Thus threatened, what was England's duty? Aware that the Danes were ready and willing to yield their powerful fleet to the service of Napoleon, and that every hour of delay exposed this country more imminently to the danger of the armament falling into the enemy's hands—was that a moment to hesitate upon the legality of dispossessing a neutral country of her sea force? The government then in power, notwithstanding the grave doubts which were raised against the proceeding, concluded it was not. By the beginning of August, a British fleet, consisting of twenty-five sail of the line, and an army comprising twenty-seven thousand British troops, were approaching the capital of Denmark. But whilst England desired to prevent the acquirement of the Danish navy by the enemy, she had no wish for spoil. All this country asked was the safe keeping of the fleet until the danger should be overpast; and with this view propositions were made to the crown prince—both before the despatch of the British fleet, and again, after its arrival on the Danish shores—for its temporary surrender. These overtures being declined, however, the forces were compelled in self-defence to proceed to a passage of arms. The bombardment of Copenhagen began on the 2d of September, and lasted almost without interruption for seventy-two hours, when after a brave, though fruitless resistance, the town capitulated.

Of the appearance of the town immediately afterwards we have a vivid description in Mr. Scoresby's story of his voyage. He says:—

“In the autumn of this year (1807) there was a call made upon all seamen, especially upon those engaged in the Greenland trade, by the government, for assisting in bringing the fleet captured from the Danes into a British port. Without reflecting on the merits of the cause—or the justice of the step by which the fleet of a nation at peace was demanded, to prevent its falling into the hands of an enemy, and on being refused was seized by force of arms—but rather considering that whatever government did must be right, an opinion I had been taught to hold, I was the first to offer my services in the national cause. All the sailors of the port, indeed, previous to my taking this step, and which was a powerful reason for it, refused their assistance, from the foolish persuasion that it was a scheme for impressing them; but on my name being given in as a volunteer they came forward to the amount of fifty-four in one day; and afterwards a number more engaged in the service.

“I rejoiced in the opportunity of varying my voyage, and of witnessing the discipline of the navy, which, for many branches of seamanship, I was persuaded must be the best school in the world; though the Greenland trade, I afterwards found, for practical navigation, was the best theatre of exercise that could be visited.

“Two sloops being fitted out for carrying us to Leith, the place of rendezvous, I embarked in one of them on the 23d of September 1807, and arrived on board the *Texel*, Rear-Admiral Vashan, which was appointed as a receiving ship for the occasion.

“Here I had the first taste of painful inconvenience.

As there was no place adapted for our *hammocks*, I was obliged to spread my bed on the deck, where six of us were crowded between two guns. I was dreadfully squeezed; the *truck* of a gun-carriage formed my pillow, and my situation was so uncomfortable that I never closed my eyes all night. It was a great relief to me, therefore, when the boatswain's mate *pip*ed all hands at day-break. I arose and felt refreshed by walking the deck.

"Towards noon, myself and some of my companions were drafted on board a merchant ship, where, being joined by a number of the Leith Greenland-men and sea-fencibles, we made sail for Copenhagen. Mr. Gourley, flag-lieutenant to Admiral Vashan, was appointed our officer; who, having letters from the admiral to the commander-in-chief of the fleet at Copenhagen, expected to be intrusted with the charge of one of the Danish prizes.

"I had not been many hours on board of this vessel before Mr. Gourley distinguished me from my companions, and requested my assistance in serving out the provisions—an office I readily undertook. He at the same time invited me to join him at his meals in the cabin, and during the whole of the passage showed me the most friendly and pleasing attention. I had great occasion to be delighted with his character; his amiable and unostentatious manners, his officer-like conduct, and, above all, his distinguished piety, commanded respect from every class of society. Though at this time I was far from being pious myself, yet, being taught to regard reli-

gion as the most important concern of life, I revered the sanctity of Mr. Gourley's character, and was almost stimulated to emulation. He was not religious for himself alone, he was anxious for promoting the glory of God, and unwearied in his exertions to further the cause of Christianity among the sailors committed to his charge. Hence he was charitable and humane. In his professional duties he was for some time employed in the repugnant and obnoxious service of impressment. In this he found a severe conflict between his high sense of duty and his natural humanity. On the former he acted—on the latter he wished to act. He boarded, among other vessels, one of the Greenland ships, of Whitby, on its homeward passage, for the purpose of impressing some of the crew ; but he found that all the men liable to serve his Majesty had quitted the ship in a boat, and rowed out to sea. The boat was yet in sight, but in place of chasing it, he earnestly inquired whether these men had a compass and provisions ? Finding they were ill provided, he ordered the master to hoist a signal of recall for them. 'For,' he added in conclusion, 'if I chase these men they will row further off shore and perish—*my duty is to impress men, not to drown them !*' with this he returned to his ship, and stood away out of sight.

"A pious character, especially in the navy, was at this period almost certain of persecution. Mr. Gourley's religious habits and conversation gave rise to innumerable gibes and affronts. One example, in which his persecutors, however, were disappointed of their expected enjoyment, deserves to be recorded. Being invited to

visit Admiral Vashan, while on the Leith station, he met at the dinner table a number of naval officers of principles very widely different from his own. He, it has been premised, was decidedly *pious*; they were decidedly *scoffers of religion*. In various indirect attacks, in the course of conversation, they attempted to ridicule his sanctity—his reading of his Bible—his prayers—his practice of teaching and endeavouring to reform seamen under his direction—and his other *pious practices* of a similar nature. These insinuations he bore with great patience and forbearance. Afterwards becoming more bold and personal in their attacks, the admiral, who had hitherto been a silent observer of what passed, unexpectedly interrupted them, and addressed the company to the following effect: ‘Gentlemen,’ said he, ‘I think your remarks ill-placed, ill-mannered, and unjust. I acknowledge with you that Mr. Gourley has not the talent that some of you have before now manifested in my hearing—in profane swearing—obscene wit—ridiculing of religion—or in the general *excellences* of a bottle-companion,—neither do I believe he possesses that peculiar kind of desperation *you* call COURAGE, which should induce him first to offend his brother-officer, and then, by way of *reparation*, shoot him in the qualified way of honour. But place him in the tumult of battle—set him amid the carnage of war, with death in a thousand shapes around him, or place him on a leeward shore, where the bravest are almost paralyzed with their awful situation, and you will find him cool, courageous, and collected. I venture to say there is not a man among you who would be so

well able to do his duty.' The company was silenced by this seasonable reproof, and Mr. Gourley found the benefit of his admiral's good opinion.

"Under convoy of the *Amaranthe*, sloop of war, we arrived safely and without adventure in Copenhagen Roads on the 9th of October, where we anchored in the midst of a fleet of near a *thousand sail* of ships of war and transports.

"A short time after our arrival Mr. Gourley waited on the commander-in-chief, Admiral Lord Gambier, who carried his flag on board the *Prince of Wales*, ninety-eight. His application, however, for the command of a vessel was not successful, arrangements having already been made for putting them under the charge of the lieutenants belonging to the fleet. My disappointment was as great as Mr Gourley's. He had encouraged me to expect that I should still accompany him in whatever command he obtained, and be employed in the class of officers—an event to which I looked forward with considerable interest, since it promised me the opportunity of cultivating the friendship of so excellent a man, as well as the prospect of an excursion of a pleasant rather than a disagreeable nature.

"The evening was so tempestuous that there was no possibility of communicating either with the fleet or the shore; but about noon of the 10th, the weather having somewhat moderated, we were ordered under the stern of the admiral's ship, and taken on board in three *launches*; it yet, however, blew so hard that we were three hours in rowing a distance not exceeding two hundred yards!

"I had now an opportunity of examining, when on service, a first-rate British man-of-war, and an admiral's ship. The magnitude of the vessel—the great number of men—the numerous decks—yet the order, quietness, cleanliness of the whole, excited my surprise and admiration. Rambling about and exploring every place to which I could gain admission, I traced six different decks, three of which, besides forecastle and poop, were occupied by the guns, the number of which on board were upwards of a hundred.

"When all hands were called in the morning, I quitted my hammock, and after strolling about the decks for a few minutes, being still weary, uncomfortable, and unrefreshed, I sat down upon a gun in the *waist*. While involved in thought, and unconscious of what was passing around me, the rising of the sun above the verge of the horizon notified the time for the *daylight gun*. The gun immediately behind me was selected for this purpose, and the preparations being intentionally made with great silence, it was fired before I was aware of it. I almost tumbled backwards with the surprise; and the noise in that confined place of a long two-and-thirty pounder was so deafening, that I did not recover my perfect hearing for some hours afterwards.

"The weather being moderate, in the morning we were carried in launches to a small cutter, which immediately made sail and took us into the harbour or *mole*, and placed us on board of the *Rosamond*, sloop of war, there to await our final appointment and distribution.

"The demand for volunteer sailors, throughout Bri-

tain, for the Copenhagen service, was so liberally answered, especially by the ports extensively engaged in the Greenland trade, that, with the proportion allowed by each of the men-of-war, there was found a surplus beyond what was deemed necessary for navigating the Danish fleet. As such, at the suggestion of an officer of rank (Sir Samuel Hood, promoted to the rank of admiral during the stay of the fleet before Copenhagen), it was deemed practicable to preserve a number of the enemy's gun-boats, which it had previously been designed to destroy. To the command of one of these gun-boats I was now appointed, and had the choice of six men out of one hundred and twenty-four, to assist in navigating it to England. I now quitted the *Rosamond* to take charge of the gun-boat ; but as it was neither decked nor in any way fitted, I sought lodgings along with my little crew on board of another gun-boat that was in a greater state of forwardness, until ours should be capable of affording us accommodation and shelter. I was by no means satisfied with my appointment to one of these vessels ; for, besides disappointing my expectation of learning the discipline and management of the navy, I was satisfied that these vessels could not be made seaworthy ; and that the attempt to take them to England, at a season when stormy weather might be expected, was a scheme replete with the utmost peril to the persons who should embark in them.

“These gun-boats were about seventy feet in length, sixteen or eighteen in breadth, and about five feet deep ; and were adapted for plying in shallows, only drawing

three, or three and a half feet water. They carried a long twenty-four pounder at each end, and were rowed by thirty-two oars, under the management of sixty-four men, exclusive of those having the direction of the guns. They were intended to annoy the enemy's commerce, by attacking their ships during calms, in their passage of the Belts—a system of warfare in which they were very often successful.

“During the ensuing week we were employed in getting the guns on shore, rigging masts, fitting sails, and taking in stores, while some carpenters completed the deck.

“The *mole* is a fine basin of water, communicating by canals with the city, capable of containing the whole of the naval and part of the merchant shipping of the kingdom. It is divided by a floating bridge which separates the king's ships from the merchantmen. On the king's side is an extensive quay with a fine range of store-houses, well arranged, and, previous to this time, well provided with every article needful for the equipment of the fleet. But now the most important stores were conveyed on board the British transports; whilst we, with the crews of the other gun-boats and transports, were permitted the free range of the whole arsenal. After all this drainage, an immense quantity of masts, yards, guns, mortars, howitzers, shot, shells, wads, and other naval stores still remained, which it was impossible to take away.

“Though the British, excepting those furnished with *passes* from some principal naval or military officer, were

not permitted to communicate with the Danes, I was very anxious to visit the city, and determined to make the trial at any risk. Accordingly, on the 13th of October, I hired a boat and rowed into the city, but on every attempt to land was repulsed by cavalry stationed at every hundred yards along the quay. At length, going on board a vessel discharging fruit, I mixed with the crowd and evaded the guard.

“Copenhagen struck me as being most remarkable for its churches, rendered conspicuous by their gilded or ornamented spires. The houses are chiefly built of brick, the streets well paved, but somewhat narrow. The city is said to be five miles in circumference; the number of inhabitants are rated at 100,000.* The royal palace, called Christianburg, was destroyed by fire in the year 1794; it was now in progress of being rebuilt on an extended plan. The streets being variously intersected by canals, the means of landing stores and merchandise are extremely convenient.

“The highest interest I experienced in this visit was in contemplating the effects of the bombardment, by which, chiefly, the Danes had been induced to capitulate. To witness hundreds of houses in ruins—numbers which had been perforated by the cannon, some that had been set on fire smouldering in ashes,—to observe edifices, distinguished by their splendid domes and spires as set apart for the worship of God, partaking of similar demolition, and one reduced to a pile of rubbish,—while it made me sympathize with the feelings

* The population in 1855 was 143,591.—*Universal Gazetteer*.

of the homeless inhabitants, and regret the calamities of war, it excited my thankfulness to a merciful Providence that my country, of all the kingdoms of the globe, was almost the only one which had escaped the ravages of conflicting armies. These feelings, acute and lively as they certainly were, received considerable augmentation when I was informed of events connected with the devastation. Here, I was told, a respectable householder, neglecting the cautions of his more timid neighbours, hoped to make his house his castle and defence ; but an irresistible shot penetrated the wall, struck the too secure inmate, and put a period to his life. There, pointing to the site of the church, I was informed, a number of the outcast inhabitants, whose houses had been demolished and their property buried in the ruins, took refuge, trusting that in the house of their God they should not only obtain shelter from the elements, but sanctuary from the destructive effects of the missiles of war. But their hopes were vain, and their confidence proved their destruction. A shot, as if directed by the demon of battle, struck an arch of the tower and dislodged one of the stones ; immediately the proud cross of the mighty edifice, owing to the loss of balance, sank through the interior of the building with a tremendous crash, and crushed in its fall those who sought refuge in its shelter !

“ Turning my eyes from the desolate and ghastly spectacle of smouldering ruins, I expected to find in every countenance I met, that woeful and mourning expression of which I experienced the lively sympathy, and that

the justly indignant patriot would wear on his brow the marks of determined and revengeful hatred towards the authors of these calamities. But my surmises were not well founded; the prevailing physiognomy indicated rather gaiety, carelessness, or phlegmatic indifference. Everything I saw seemed to express insensibility. The shops were filled with customers, the portals of the exchange were invitingly open, the quays bore the marks of business, and the taverns were filled with the gay and the mirthful; and if, after all, there might be a doubt remaining as to the singular apathy of the Danes at a period of national calamity, I may mention, in further proof, that I saw in the very heart of the city the drawing of a lottery in the public street.

“Having furnished myself with such stores as I wanted, namely, tea, sugar, &c., I returned to my quarters at the mole.

“The commander of a Scotch transport, with whom I met by accident and accosted for information, offered me a copy of a regular *passport*, signed by himself, ‘John Macdonald, *captain*,’ which he assured me would be of the same service to me, if I again went into the city, as a real one. Being deficient in many articles requisite for the navigation of the North Sea, which the Danish arsenal did not furnish, I was wishful again to visit the city that I might procure them. Accordingly, on the 16th, I landed in the face of the horse guards, with whom my pass was received as genuine, and secured me against interruption. At the exchange, I was enabled to procure the principal articles I needed, and after loitering

about the streets for an hour or two, .I returned, along with two companions, to the place where we landed ; but to our great mortification we found the boat was gone. The evening was approaching, and we knew that we could not remain during the night in the city without great personal danger, for, notwithstanding the general apathy which prevailed, there were men, especially among the soldiery, who esteemed the destruction of an Englishman, when it could be done secretly, as a meritorious act of patriotism. The malice of the cavalry was several times experienced. Among our comrades one had his arm wounded by the sword of a Danish horse guard ; and another, not having a pass, was seized by two of the infantry, who endeavoured to take him to confinement, and escaped only by throwing them both over the quay into the harbour, and immediately leaping after them : being a good swimmer he reached a boat that was passing down the mole and thus made his escape. These circumstances, combined with the imprisonment of one of my own crew who was caught in the street in the evening, and who escaped by bribing the jailor, rendered any longer stay in the city extremely hazardous. Yet no means of reaching our station presented itself. One line of streets towards the south, appearing to us to lead to the arsenal, we traced it for some distance, went over a drawbridge where a guard demanded our passport, and entered the gates of a basin where a number of vessels were *laid up*. Here our progress was stopped by a range of buildings. Not knowing the language our inquiries were fruitless, and being warned by the setting sun and

the ringing of bells, of the approach of night, we became more and more anxious to reach the mole. The apparent hazard of our situation was a sufficient temptation to induce us to embrace the only chance that seemed to be left to us, that was, to take possession of an old boat lying by the side of the quay, and endeavour in it to make the passage down the harbour. We embarked, and with a piece of wood in place of oars, made way as far as the mouth of the basin, where we found a boom chained across for the security of the property. At this moment of perplexity, a man approached us in one of the adjoining vessels, bawling and menacing us with a bludgeon which he carried in his hand. Being obliged to return, he met us at the landing-place, and presently raised a crowd round us, who threatened to seize us ; we, endeavouring to escape, hurried towards the gateway of the basin that we had entered—but, being past the hour of sunset, it was closed, and the sentry refused to let us through. The vociferations of the Dane became more and more clamorous ; the people surrounded us, and made us understand that we should be taken to prison. At this critical juncture, a gentleman, who appeared to be of some consequence, rung for admittance ; inquiring the cause of the uproar, he received from the *boisterous* Dane an account of the circumstances. Turning to us, he asked in tolerable English, why we had trespassed in the ‘Danish Liberty’—(a place containing only private property, which, by the articles of capitulation, was to be kept from the intrusion of the British)—and why we had presumed to take possession of a Dane’s boat ? After

making the best excuse I could,—which being far from satisfactory, the clamours of the populace, and the desire to imprison us rather augmented than diminished,—I fortunately remembered my pass, and instantly producing it, requested to be released. The gentleman carefully examined it, whilst we were trembling for fear of detection, and after some minutes' silence, spoke in an authoritative manner to the guard, on which the gates were opened to us, and, after thanking our benefactor for his interference in our behalf, we happily escaped.

“ We now retraced our steps to the original landing-place, where, on our arrival, a boat belonging to a transport was just putting off. The captain was not willing to give us a passage; but we were not to be refused, and first leaping in from the quay, we then begged permission to be landed at the arsenal, or the floating bridge, one of which points the boat must needs pass. Leave at length was good-temperedly given us, and we arrived safely at our quarters, after a very narrow escape from a Danish prison. Our danger was the more imminent, as in two days the mole was to be cleared of British shipping, and within a week the whole place was to be evacuated.

“ The next day (17th of October), having made all the preparations our opportunities would admit, and having received from Admiral Hood, who occasionally came to inspect our progress, such stores as he deemed our necessities would require, as far as they could be supplied, we were ordered to proceed into the roads.

“ By this time the whole of the enemy's fleet, in a condition for service, was rigged, provisioned, and manned;

and such ships as were building, but not sufficiently advanced to be capable of removal, were destroyed, together with floating batteries and other disposable apparatus of war.

“One ship, a seventy-four, that was completely timbered and well advanced, was cut in the keel in several places, in the floorings and beams, and then all the shores, or supports on one side being removed, it was hauled over and destroyed. I witnessed this extraordinary launch; the noise of the cracking materials was equal to the loudest thunder I ever heard.

“To guard against any surprise or retaliation from an exasperated enemy on the evacuation of the arsenal and mole, some of the gun-boats, armed and manned, were stationed along with certain ships of war to protect the rear of the fleet and the embarkation of the troops.

“As we quitted the mole, we received orders to proceed to the beach, and assist in embarking the army. We carried several companies of riflemen to different ships of war in the course of the day, and in the night came to an anchor. But the day did not pass without danger—it was a time of most imminent peril. Among other stores which we had on board was a large quantity of gun-powder in boxes. Directly over the place in which it was stored was our fire hearth, consisting of a match-tub lined with brick (the contrivance, I believe, of Admiral Hood). During one of our passages from the beach, when loaded with soldiers, the vessel was discovered to be on fire! The heat of the fire, penetrating the bricks, had already consumed the bottom of the tub, and set fire to

the deck. The crowded state of the vessel greatly cramped our exertions, but by the good providence of God we got it extinguished, when there was scarcely an inch of deal between the fire and the gunpowder !

“ In the trials we had with the vessel in the roads, we found it very ill-calculated for the sea. Besides being deficient in many most important stores, such as quadrant, log, candles, fire-hearth, &c., the bow and stern of the boat were very insecure. For permitting the action of the guns as near the level of the water as possible, the bow and stern were cut down to the water’s edge, and the opening, without stern-post or stem, filled up with posts two inches thick. These, nailed together with a few small nails, and caulked, were all the security we had against the entrance of the sea in pitching.

“ The danger of proceeding in the gun-boats being more and more formidable, I was requested by our little fleet to make application to Admiral Gambier for our release from the service. This I did by letter, enclosing a memorial signed by a number of the masters. The request was not complied with (I am not sure, indeed, that it was delivered), though measures, we afterwards found, had been taken to protect us, as far as practicable with the completion of the design of taking the gun-boats to England.

“ At day-break on the 20th, we were ordered by a boat from H.M.S. *Alfred*, Captain Bligh, to get under way and proceed down the Sound. Having neither windlass nor capstan, this was a work of some labour to us. We now preceded the fleet out of the Grounds, steered down the

Categat, and lay to off the *Koll* for orders. Captain Bligh, hailing us, ordered us under his stern, and took us in tow. At 5 P.M. he made sail before the wind. We passed the night pretty well, burning slips of fat pork, in place of candles, lighted by means of a little gunpowder and tow in the pan of an old gun-lock.

“The following day we had strong gales with a high sea. Having passed the Scaw in the morning, the *Alfred* hauled up W.N.W., with the wind a-beam. Hitherto we had towed pretty easily, but now the sea made a free passage over the deck, washed out the little fire we had ventured to make, and kept the *watch* continually drenched. But this was the least evil; the vessel plunging into the sea started the bow-port, and admitted such a quantity of water that the pump was kept continually going. Our great fear now was that the posts might be driven in, in which case the boat must have been dragged under water in a moment.

“The whole of the day we were towed at the rate of nine or ten knots. As we could not get anything cooked, we could only eat bread and raw pork, and as our clothes could not be dried, we were obliged to remain continually wet. Those on deck (one man at the wheel and another at the pump) we frequently relieved—securing ourselves from being washed overboard by ropes fastened to ring-bolts in the deck.

“Night again approached, and it appeared to be the intention of Captain Bligh to continue us in danger. As the water now gained rapidly on the pump, and as it was impossible we should survive through the night, we made

a signal (a blanket in the rigging, having no flag), which was observed by the sentry on the *Alfred's* poop. The ship now made more sail, and after running us almost under water for two hours, to get ahead of the fleet, she *hove to*. We immediately set our sails and ran under her lee. We had previously taken our clothes upon deck, which were readily taken on board of the *Alfred*, and we quickly followed, thankful to a gracious God for another instance of his preserving goodness. The vessel was by this time so nearly filled with water that the sailors were unable to get below to save any of the stores ! As soon as I had taken a little refreshment, I slung my hammock between two guns, and retiring to rest, slept more soundly than I had done before since leaving home.

“ Captain Bligh treated us with great civility, and *excused* us from all duty ; and as the boatswain invited me to mess with him, I found myself very comfortable. From the 21st, the day I entered the *Alfred*, until the 29th, when she anchored in Yarmouth Roads, I had an admirable opportunity of observing and learning the discipline of a line-of-battle ship. The *method* that was observed in every proceeding was new to me and instructive ; and the order and comfort in the internal arrangements were highly pleasing. Two things, however, of frequent occurrence were, on the contrary, not a little painful—the horrid blasphemies and general wickedness of the crew, and daily instances of punishment.

“ Captain Bligh, I could perceive, was an active, superior, and zealous officer ; but he was a very severe disciplinarian. The morning after the gun-boat was

abandoned, '*All hands to [witness] punishment,*' was the boatswain's summons. Among the rest, I approached the gangway, where I perceived a man stripped to the skin, and about to be *flogged*. A boatswain's mate with a hard cord, separated into nine thongs, began the punishment by swinging it behind his own back, and with all his might applying it to the poor wretch's shoulders. Every thong produced a red bar across his back, and after a few lashes the blood sprang from the lacerated parts. Meanwhile, when the poor fellow was writhing and groaning in the greatest agony, the officers were looking on with the most calm and placid indifference. I sickened at the sight, and hastened away from the spot. This man received, I believe, only a dozen lashes—others received more. His crime was 'drunkenness'

"Captain Bligh, I should observe, though severe, was always just, according to his opinion of naval discipline, in his punishments; but the power, so unlimited and so arbitrary, is not always wielded with the same discretion. I myself witnessed several most daring and unrelenting violations of every principle of justice and humanity. Lieutenant ———, who commanded the *Seyeren*, a Danish prize, to which I was subsequently transferred, usurped an arbitrary and unjustifiable authority in the daily exercise of an unfeeling—nay, a barbarous disposition. Men were flogged without a specific fault—some without the shadow of a crime. One man received three dozen lashes because a rope in his hand *ran foul*—another two dozen because he could not lie out on the top-sail-yard without being thrown off by the top-sail, which

was not properly secured—and a third was flogged in three successive weeks because the men under his charge, but over whom he could exercise no control, were not active in their duty ! In the latter case the punishment was so aggravated that the man became indifferent about his life—he told his messmates that his life was a burthen to him ; and shortly after his last punishment, which I myself witnessed, he fell from the foretop on the deck (through carelessness, if not by design), and was killed on the spot. Such tyrannies loudly called for reform. It is needful to discipline that the captain of a man-of-war should have every reasonable means of enforcing his authority; but that unlimited power with which he is usually endowed is too dangerous to be intrusted in general hands. Besides, does it not break the spirit of our seamen to be punished with such severity for faults scarcely worth naming, and sometimes for no fault at all ? Is it not most trying for manhood to be struck, or perhaps kicked as well as cursed, for an idle scoundrel, by a boyish midshipman of neither years nor discretion ? And if the man, conscious of his integrity and his own irreproachable conduct and acknowledged seamanship, ventures to give way to his indignation by a rash word, is it not painful to humanity for him to be lashed to a gun and flogged ? And, perhaps, if he be brought before a superior officer, and dares, in the manliness of his heart, to look undaunted instead of cringing, is it not destruction to every principle of natural dignity and courage to flog him for *looking contemptuous* ? Yet such things were of almost daily occurrence in one or other of his majesty's ships !

"On the 2d of November, the *Alfred* then being at anchor in Yarmouth Roads, I was sent for by Captain Bligh, and informed that the admiral had directed us (myself and gun-boat crew) to be put on board the *Seyeren*, seventy-four (a prize under the orders of the *Alfred*), after the arrival of which ship at Portsmouth we should be discharged.

"Leaving this orderly and comfortable ship we arrived alongside of the *Seyeren* about four in the afternoon. The vessel was commanded by Lieutenant ———, first of the *Alfred*, whose severe and ill-judged conduct I have already mentioned, and navigated by fifty seamen only, with eighty pikemen, and five hundred soldiers. There were also about fifty women and several children on board.

"In this vessel—in which we were excessively uncomfortable, ill-treated, insulted, robbed by the crew, and refused redress by the officers—we endured continual hardships.

"On the 6th we weighed for Portsmouth. On the 8th a man, named John White, who had been severely flogged by the commander, fell from the fore-top and was killed. So little attention was paid to this accident, that I was not aware of it until two hours afterwards, although on deck at the time. A few minutes after the death of White, the fore-top-mast was carried away. All hands being called to clear the wreck, the ship was anchored, the sails furled, and the reparation of the damage immediately commenced. In the course of twelve or fourteen hours the ship was re-equipped with

jury-sail forward, and new fore-top-mast. We then made an attempt to beat to the south-westward ; but, finding our efforts unavailing, the ship was again brought up.

“ The 10th was a day of peril—we encountered the most alarming hazard of shipwreck, and that of the most perilous kind that I had ever been threatened with or had ever witnessed. The wind blowing strong from the west, almost directly against our course, we remained at anchor all the day, in nineteen fathoms water, about two miles to windward of *Galliper*, a dangerous sand which lies at the distance of twenty-seven miles from Orfordness, the nearest land, and thirty from the North Foreland. Towards night the wind freshened, and at dusk blew a dismal gale. The commander at this time of danger, supposing the ship safe (or, as was judged probable, a habit of inebriety he had long practised about this period of the day, rendered him incapable of determining), ordered ‘all hands below’ to enjoy themselves on the remnant of their rations, such as had any, consisting of coarse biscuit and water. I, among the rest, retired, and being wearied with previous exertion, lay down on the *bitts* and fell into a slumber. About eight I was roused by a cry of the pilot, ‘For God’s sake cut the cable,’ seconded by the more unhallowed vociferations of the commander. I instantly rushed upon deck, and to my inconceivable horror observed *broken water* within a hundred yards of our lee ! All was in the greatest confusion ; the cable being cut, the fore-storm-stay-sail was hoisted and instantly blown to pieces ; the main-stay-sail

shared the same fate. Happily the fore-sail, being reefed, withstood the violence of the gale, and gave head-way to the ship. The danger seemed to recede. This circumstance, while it raised our hopes, only prepared us for higher degrees of alarm, breakers being presently seen on the weather-bow, which it was impossible to clear. Nothing short of actual annihilation could exceed the awfulness of our situation; the heavens poured down torrents of rain; the wind seemed loosened for destruction; the sea was thrown into prodigious turbulence, while the darkness was such that nothing was visible save the luminous breakers which shone with phosphorescent and terrifying lustre. The people now waited in palpitating silence for their inevitable fate; not so the pilots—they ran about the decks with the meanest and most contemptible cowardice, wringing their hands, and deploring their hard fate in perishing after years of service! For my own part I was calm and collected. Death seemed inevitable, yet I had a sort of vague and inexplicable confidence that a merciful God would save us *for the sake of so large a number of immortal souls*. The ship now entered the breakers—the sea raging and foaming around us with awful vehemence—and instantly struck! ‘She strikes, she strikes!’ was the involuntary and universal shout—the effect was appalling. A repetition of the shock made the ship quiver from end to end; while men, women, and children, by piercing screams announced the awful circumstance, and anticipated a horrid catastrophe. But, notwithstanding the shocking profaneness which existed—both crew, officers, and passengers practising such

refinements in wickedness as converted the ship into a resemblance of hell itself,—yet the Lord, whose goodness is infinite, remembered us in mercy, and directed us across the sand into deep water. All was in a moment joy and gladness—the pilots, finding the ship safe under the lee of the sand, retired to enjoy themselves over a glass of grog ; and the crew returned to their habits of blasphemy ! For my own part, I felt a degree of thankfulness to Almighty God for the deliverance ; but it was far from the sanctified thankfulness experienced by the true disciple of Christ. Since then I felt fully convinced that had we perished in this danger, I, as well as hundreds more, must have awoke from the sleep of death for the enduring of eternal torments !

“ In retiring to my hammock, which I was obliged to hang in the cable tier (the lower deck in the ship), a place where no light was allowed, I stumbled over a person rolled in a blanket ; urging him to remove from a situation where he must be continually liable to be trampled upon, I accidentally laid my hand on the marble-like face of a corpse ! It was the body of the man who was killed. Shuddering at the circumstance, and shrinking back from an object so repugnant to youthful sensibilities, I retreated too far, and fell down the open hatch into the hold. Mercifully the depth was not great ; but falling on the chine of a cask with my shin, I stripped off the skin and broke the small bone of the leg ! I lay for some time motionless, but aroused by a sentry above me crying out, ‘ Hollo, there ; are you killed ? ’ I crawled out of the place, and with difficulty found the way to my

hammock, where I lay in great pain till day-light, and then applied to the surgeon for assistance.

“During my stay in this vessel, which was fifty days, I experienced the most painful privations,—hunger, cold, and severity of discipline. The hardships, indeed, that we endured were such that my companions became insensible to both moral feeling and personal safety. I have seen them take a lighted candle to the door of the magazine (which in this ship was unguarded) in search of any trifle they wanted, and on my cautioning them of the danger, they would reply, ‘What matter?’—they cared not if the ship were blown up and we were all destroyed together !! At other times they would daringly and blasphemously utter a desire that the ship might sink, or that lightning might strike her and send us all to perdition ! Such horrid imprecations were frequent. Yet they were the effect only of unexpected and protracted detention, short allowance of provisions, and deficiency of clothing. In all of these grievances, although I partook in common with them, yet I felt an unaccountable serenity and contentedness which I have ever reviewed with surprise.

“While a small sum of money, which I had taken out with me, lasted, I did not feel the want of any of the necessaries of life ; but when, by frequent purchases, for supplying myself with stores in which the allowance of the ship was deficient, and by frequently contributing to the wants of my messmates, I had exhausted my fund to the last shilling, I began to feel really destitute. But I suffered the most from cold ; the whole of my bed-clothes were those furnished by the navy—consisting of a single

small blanket and a flock bed. Wrapped only in this blanket, and exposed to a current of frosty air entering by an open stern port close by which I lay, I was almost frozen every night, and took such a severe cold as contributed not a little to increase the consumptive symptoms which for some years had threatened me.

"Having made my want of cash known to my father, I took the first opportunity of landing after our arrival at Portsmouth, expecting a remittance. Unfortunately, however, that remittance was only an order on his banker in London, and was not negotiable. Without a farthing in my pocket, I wandered up and down the town the whole day in a truly pitiable state of disappointment.

"At length, almost exhausted by hunger and fatigue, I entered a tavern, meaning to offer my watch for security until I could pay for my refreshment. But as I entered the door my courage failed me ; my eyes became dim with rising tears ; and I hurried from the bold, inquisitive gaze of the waiter who approached to receive me. Never before had I known the want of a shilling ; now I personally felt what the anxieties of one must be, who knows not where he shall satisfy the cravings of hunger, or where he can be permitted to rest his wearied frame. I had not been reduced to this dilemma, but I did not know how to get back to the ship. At length, long after the evening had closed upon me, and I found myself in danger of ranging the streets throughout the night, I fell in with a waterman, and solicited him to take me on board the *Seyeren*. With some persuasion and the promise of a good fee, he was induced to consent ; and I

once more entered with joy a place I before deemed the counterpart of the abode of the wicked in eternity !

"The 21st December was the joyous day of my emancipation. All hands were ordered on shore to the Clerk of the Cheque's Office, to be paid and discharged. Here I received £11, 19s. 2d., the amount of bounty, travelling money, and wages for three months' service.

"The port-admiral (Coffin) was present at our discharge. Mr. ———, who had favoured me with some civilities, and had ascertained the cause of my embarking, introduced me to the admiral, and warmly commended the patriotic zeal which had impelled me to the service.

"After treating my messmates (the late crew of the gun-boat) with a dinner and other refreshments, I took my place in a coach just about to leave Gosport, and arrived in London on the following morning.

"Thus ended an adventurous and trying voyage—a voyage in which I voluntarily submitted to every service and privation of the commonest sailors, though being furnished with introductory letters from naval officers of some consideration, I might probably have fared better had I made use of them ; but I was wishful to take my chance in the ordinary way, that I might have a better opportunity, by personal experience, of learning the discipline of the navy, and the duties expected from a seaman in that service.

"Having exchanged my sailor's garb for a dress more suited to the refinements of the metropolis, I indulged myself in a few days of enjoyment in visiting the most popular objects of curiosity and interest."

CHAPTER IV.

INTRODUCTION TO SIR JOSEPH BANKS—VOYAGES OF 1808-1809—EXAMINATIONS OF SNOW CRYSTALS—ALARMING INCIDENT—SECOND SESSION AT EDINBURGH—THE TIDE-WAITER OUTWITTED—INTRODUCTION TO PROFESSOR JAMESON—VOYAGE OF 1810—ACCIDENT—TOUR IN SCOTLAND—HAZARDOUS VOYAGE IN A LEITH SMACK—PROMOTION TO THE COMMAND OF THE "RESOLUTION."

1808-1810.

WHILST in London, Mr. Scoresby, at the request of his father, who had long enjoyed his acquaintance, called upon Sir Joseph Banks, whom he speaks of as a "liberal and enthusiastic promoter of everything generous and scientific." His journal continues:—

"To overcome my natural diffidence, and call upon a person to whom I was an entire stranger, was to me an extraordinary *trial*. Having, however, prepared the way by a note which I delivered to the porter, I was shown into Sir Joseph's study, and received by the benevolent man with that frankness and cordiality for which he was so remarkable. His freedom of manners soon dissipated the timidity I felt on being first introduced, and I was enabled to converse very freely on the phenomena of the Arctic regions which have no parallel in any other country. The worthy baronet was exceedingly kind; he invited me to his weekly breakfast on the ensuing Thursday morning,

when I was introduced to Mr. (afterwards Sir Everard) Home, Professor Carlisle, and several other gentlemen.

"These interviews led to a correspondence which was continued pretty regularly, until within a few weeks of his lamented death; and gave rise to a personal intercourse at every opportunity, from which I derived very great mental advantages."

During the voyages of 1808 and 1809, Mr. Scoresby began to exhibit that talent for observation, which afterwards rendered him so conspicuous among Arctic navigators; in the latter voyage especially, when he employed his leisure time in studying the natural history of the Polar regions, and collected many specimens of plants which were until then quite unknown. He also made correct and regular meteorological observations, "whereby," he says,* "I obtained some unexpected results on the temperature of the higher latitudes; the mean cold appearing to be upwards of 15° lower than that usually attributed to the same parallel by modern meteorologists." But the most curious and altogether original observations which he made were in reference to the forms of snow crystals. He says, "Having discovered that the snow flakes which fell in severe colds were beautifully crystallized, I examined the different forms with a microscope, made drawings of about forty figures, and accompanied them with a brief general description and a table of the state of the atmosphere, as to temperature, pressure, &c., when each crystal was

* MS. Autobiography.

seen." Of the beauty of these crystals, he remarks elsewhere: *—

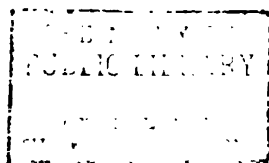
"The extreme beauty and endless variety of the microscopic objects procured in the animal and vegetable kingdoms, are perhaps fully equalled, if not surpassed, in both the particulars of beauty and variety, by the crystals of snow. The principal configurations are the stelliform and hexagonal; though almost every shape of which the generating angles of 60° and 120° are susceptible, may, in the course of a few years' observations, be discovered. Some of the general varieties in the figures of the crystals may be referred to the temperature of the air; but the particular and endless modifications of similar classes of crystals, can only be referred to the will and pleasure of the Great First Cause, whose works, even the most minute and evanescent, and in regions the most remote from human observation, are altogether admirable."

A somewhat alarming incident occurred at the outset of the fishery of 1809. He relates it thus:—

"One of our harpooneers, during a fresh gale of wind, having struck a sucking whale that was under maternal guidance, the other boats were dispersed about with the hope of entangling the mother. It pursued a circular route round its cub, followed by the boats; but its velocity was so considerable that they were not able to keep pace with

* "Arctic Regions," vol. i. p. 427.





it. After some time I also engaged in the chase, and, having marked the proceedings of the fish, selected a situation where I conceived it was likely to make its appearance; it rose in the very spot, and, though unperceived by us, struck the boat such a terrible blow that the bottom was driven in, and it sank in a moment. Assistance was not very distant, and after a few minutes of peril, we were happily rescued without having sustained any particular injury."

In the autumn of 1809 Mr. Scoresby again visited Edinburgh. He says: *—

"My father had been so well satisfied with the improvement I derived from my visit to Edinburgh, in the year 1806, that he not only permitted, but even requested me to renew my studies at the University. Accordingly I set out early in the month of November, and having taken comfortable lodgings, began to make arrangements for the course I was to pursue. To a person educating for a profession there is no difficulty in the choice of *classes*, for he must know what branches of study belong to his profession; but to one who has only general knowledge to seek, the plan of a course of study is more difficult, and the choice equally important. At length I decided. Having for some time cultivated a habit of observation and inquiry, and by occasional reading (very occasional and very excursive, for as yet I had never read a book of science through) made myself tolerably

* MS. Autobiography.

acquainted with the rudiments of general knowledge—the attendance to several branches of learning was now to me a matter of comparative ease to what it was on my first entering college. I therefore entered upon an extensive field of inquiry, and took out tickets for natural history, two classes of mathematics, and logic; in all, four daily classes. These, with anatomy and some gymnastic exercises, completed the routine of my studies; which, with the extending of my notes in natural history, and mathematical and occasional logical exercises, almost entirely filled up my time. But the exertion proved too great for the delicacy of my constitution. For years I had been of a consumptive habit. For years my appetite was so bad that I knew not what it was to enjoy a dinner; and for the same period I was liable to severe colds. I had frequently hectic symptoms, and sensible perspiration altogether ceased. I was so enervated when in Edinburgh, that the exertion of running up a dozen of the College steps would cause my heart to palpitate with such a violence that I could distinctly hear it, and would raise my pulse from ninety or ninety-five—its most usual rate—to one hundred and twenty or one hundred and thirty vibrations in a minute! Yet I never applied for advice; but pursuing a system of great abstemiousness and regularity of living, and avoiding every kind of excess, for which, indeed, I had no taste, I was graciously upheld, and enabled to go through with my studies in the most effectual and uninterrupted manner.

“Excepting a little deficiency in cleanliness, an article

for which lodging-houses in Edinburgh are* not famous, and abating a small want of *conscientiousness* in my hostess respecting her right to my stores, I found my quarters at Mr. Schearer's exceedingly comfortable. Schearer, who was a German, followed the occupation of a maker of *wooden clocks*. An anecdote respecting him may be recorded. In the manufacture of the so-called wooden-clocks, the principal wheel work and some of the pinions are of brass. Castings of these, on a cheap and extensive scale, being made abroad, Schearer was in the habit of supplying himself from Germany. A box had recently been imported at Leith, containing these materials, addressed to my host, which, being an article not specified in the schedule of *duties* in goods of foreign manufacture, was to be charged *ad valorem*. It was valued at £5. The officer who inspected the box, perceiving that its contents were entirely machinery, conceived it must be vastly underrated, and accordingly made a seizure of it; and advertised a public sale, having first, according to law, paid the importer £5, the nominal value, together with a certain additional sum per cent, which the *act* expresses. Schearer attended the sale. After the auctioneer had sufficiently described the article, and set forth with vociferous eloquence the multitude of clocks that could be made of the machinery, the probable value of each, and the sum total that might reasonably be calculated as the value of the whole contents, Schearer stepping up to the rostrum, begged to undeceive him, as he was under a mistake as to the completeness of the

* Half a century ago.

machinery,—‘For, gentlemen,’ said he, ‘I wish you to take notice dat dare is not one perfect clock in de whole box; dare is only *one-half* of de machinery here!’ This piece of information so depressed the audience, that Schearer himself became the purchaser for the reduced sum of fifty shillings, being the value as old brass, and carried off the box in triumph. After he had obtained secure possession he exclaimed,—‘Gentlemen, de oder half of de machinery is on its passage; be so obliging as to seize dat too!’

“In taking out my ticket for admission to the natural history class, Professor Jameson inquired my object in attending the University, and the profession for which I was designed. He was surprised when I announced myself as a sailor (being, I daresay, the only one in the College), and still more so when he understood my usual voyage was to the whale fishery of Spitzbergen. This led him to make many inquiries respecting the natural history of the Polar Sea, and especially of the whale. When I informed him that I had drawn up descriptions of the whale, and had kept regular meteorological journals for two or three years, he expressed such an interest in these things that I ventured to offer for his inspection the book in which my observation were recorded, an offer which he seemed eager to embrace.

“Soon after the manuscript was put into his hands I received a card inviting me to dinner. My extreme diffidence rendered my introduction into a party, consisting of scientific men of eminence, with accomplished and intelligent women, at first inconceivably painful. I felt

such a degrading sense of my own inferiority, that I could not summon vanity enough to imagine that I could be the object of any attention. The free and encouraging manners of the professor and his friends, however, and the frankness of the ladies, soon dissipated every painful feeling, and enabled me at length to enjoy the uncommon treat that such a party presented.

"To my great surprise the civilities of the kind professor and his family did not terminate here. I was repeatedly invited to dine with him, and invariably met that kind of refined and intelligent society for which Edinburgh is so eminent, and from which I derived incalculable advantages. My natural timidity, or even bashfulness, wore off, and I could eventually enter these *august* societies without fear; so that my high reverence for men of talent became moderated by repeated intercourse, until I was perfectly at my ease, and always retired from these parties benefited and refined; and having a taste for music, an accomplishment in which the Misses Jameson* and their visitors excelled, I never failed to be delighted. Among the different intelligent characters I met at Professor Jameson's, there were some whose acquaintance ripened into friendship, and who became valuable acquisitions to me in after life.

"Professor Leslie, two of whose classes in mathematics I attended, showed me several civilities. I twice breakfasted and once or twice dined with him. I generally found him alone, absorbed almost in those abstruse and

* Nieces of the professor.

original investigations that have greatly contributed to render his name eminent in science.

“Professor Jameson, approving of my observations on the Polar Seas committed to his care, caused several parts of the manuscript to be laid before the Wernerian Society, a young but thriving scientific society of which he was the president.*

“The first articles, consisting of meteorological observations made in voyages to Greenland in 1807, 1808, and 1809, and an account, with figures, of snow crystals, were read 13th of January, 1810; and on the 3d of February following, the secretary read my journal of a voyage to latitude $81^{\circ} 30'$ north, with remarks on the common whale, and exhibited my original drawings of this animal. The first of the above papers—the meteorological journal—was afterwards published in the *Wernerian Memoirs*, vol. i., pp. 249–257; and the account of the whale in the same volume, pp. 578–586.

“These papers procured for me an honour of which I conceived myself altogether unworthy—namely, the membership of this now eminent society; and the manner in which it was bestowed was to me more flattering than the honour itself. The mode of introduction to the society, according to the laws, is similar to that of other learned bodies. A person wishing to become a member must be proposed by two or three fellows, and his name and certificate of the introducing members must be suspended in the society’s apartment during several meetings; the candidate is then chosen or

* This society has now merged into the *Royal Physical Society*.

rejected by ballot. But in my case the rule was dispensed with, and on being proposed by the president, I was elected *viva voce*, *nem. con.*, at the same meeting in which my account of the whale was read.

“My friendship with Professor Jameson was fully confirmed before I left Edinburgh; while his amiable, friendly manner, and his great intelligence, won my highest esteem, his disinterested hospitality, and his anxiety to bring me forward and to encourage me to persevere in scientific pursuits, excited my lively gratitude.

“The calls of my profession obliged me to proceed to Whitby before the end of February, a considerable time prior to the conclusion of the session. I took leave of Edinburgh with regret. Not four months before this I had entered it without a single literary acquaintance in the place—I quitted it enriched by the friendship of some of the most eminent men of science in the Scottish metropolis.”

The succeeding voyage proved one of ordinary interest, and as usual very successful in its main enterprise. A serious accident occurred to Mr. Scoresby about the middle of the voyage—a heavy fall into the hold of the vessel, whereby a renewal of chest symptoms was threatened. In order to allay these he spent the summer of 1810 in uninterrupted repose; and when, at length, his health was moderately re-established, he undertook a pleasure tour into Scotland. He says, in his MS. Autobiography:—

“I received from my friend Dr. Wright a letter of in-

troduction to Dr. Stuart of Luss—a beautiful village situated on the borders of Loch Lomond. The *manse* is the general house of call for all the *literati* of Britain who visit this part of the Highlands. Walter Scott, Dr. Herschel, and the Rev. Mr. Gisborne had only left the house a few days before I arrived. From Dr. Stuart, his amiable and hospitable wife, and interesting daughter, I received the kindest attention. I prolonged my stay at this beautiful spot to nine days, during which I wandered over the romantic hills, across the silvery waters, and traversed the enchanting glens with which this quarter of the island abounds.”

Another entry in the same record continues :—

“From hence, under the guidance of my friend, Quentin Leitch, Esq., I visited Mount Stewart in the Isle of Bute, and the interesting and well-contrived observatory of Colonel [afterwards General] Sir Thomas Macdougall Brisbane of Brisbane, near Largs. In the company of this brave officer and zealous, acute astronomer, we remained two days, and were present during the taking of some important observations with a fine circular instrument by Twighstar on the plan of the magnificent one in the Royal Observatory at Greenwich.”

Mr. Scoresby returned to London in a Leith smack—a usual conveyance in those days. A storm of great violence came over them whilst crossing the estuary of the Tees, and continued with unabated vehemence until they

reached the Nore. The dangerous coast along which they were scudding was strewed with dismantled vessels and fragments of shipwrecks. The passengers—about twenty, mostly women—and the crew of the smack were in momentary anticipation of a watery grave; the former would undoubtedly have perished but for the timely interposition of authority by Mr. Scoresby, when the crew, in unparalleled selfishness, finding a depth of water in the hold, were about to leave the vessel in the only available boat. This attempt at unmanly desertion was happily frustrated; and, by the exertions of the few male passengers, the water being kept under by the pumps, the vessel was run ashore in a safe retreat, whereby the lives of all on board were mercifully preserved.

“During my stay in London,” his journal tells us, “I visited Sir Joseph Banks weekly, was constantly present at his *conversazioni* on the Sabbath evenings! and sometimes attended his public breakfasts. I also visited Dr. Home, Mr. Carlisle, &c., and attended the meetings of the Royal Society.”

On the 5th of October, 1810, Mr. Scoresby attained his majority, and on the same day, by the unanimous consent of the owners of the vessel, was promoted to the command of the *Resolution*. Captain Scoresby—as we shall continue, for the sake of distinction, to call the father—retired in favour of his son, and entered, in partnership with several gentlemen of Greenock, into a new whale-fishing speculation. “Notwithstanding,” says Mr. Scoresby in his autobiography, “the encouragement I had experienced from men of science, and the flattering

reception I had met with from the various respectable families I visited during the preceding eight months, I was still extremely diffident of my acquirements, and entirely unconscious of any superiority over the most ordinary capacities; and, having no confidence either in my talents or experience as a fisherman, I entered on the command of a ship with much apprehension for the result."

The result of the voyage we gather from the same source. "The prosperous issue exceeded my highest hopes. We obtained a full cargo, consisting of thirty whales, which produced about 220 tuns of oil, the largest quantity that had ever been taken into the port in one vessel. The voyage was without much adventure."

CHAPTER V.

MARRIAGE—RELIGIOUS REFLECTIONS—BIRTH OF A SON—ANECDOTE—INTERVAL BETWEEN VOYAGES OF 1812-18—MARRIAGE OF HIS SISTER—CHANGE FROM "RESOLUTION" TO "RESK"—DANGEROUS BESETMENT—"MARINE DIVER"—RELIGIOUS REFLECTIONS—ICE-SHOES—LAUGHABLE INCIDENT—LETTER FROM BARON VON BUCH TO GAY LUSSEAC—FIRST FAILURE—REFLECTIONS.

1811-1815.

THREE circumstances were mentioned as giving prominence, in the life of Mr. Scoresby, to the year 1806. One of these—matured during an interval of five years—we come again to consider. He tells us* respecting it:—

"Being now [September, 1811] in a situation capable, with tolerable success, of enabling me to support myself in a moderate establishment independent of my parents, I became wishful to enter the marriage state. I could conceive of no real enjoyment independent of domestic and connubial happiness. The object of my choice was Mary Eliza, second daughter of the late excellent Mr. Richard Lockwood, ship and insurance broker. Our acquaintance commenced in the year 1806. For the next two years our intercourse was only occasional, but it afterwards so increased that we met almost daily whenever I was at home. Early admiration for this young lady, by repeated intercourse and the discovery of new

* MS. Autobiography.

excellences of character, naturally ripened into esteem, and this eventually into the warmest affection. Her delicacy, refinement, and sensibility, her congeniality of temper and taste with my own, but, above all, her rectitude of conduct and exemplary piety, confirmed me in the persuasion that my affections were well bestowed, and that a nearer relation with her was essential to my happiness. Accordingly, having obtained my father's concurrence, our nuptial rites were solemnized on the 25th of September, 1811. . . . My wife's property being inconsiderable, this alliance was one of disinterested affection; nor had I occasion to regret the choice, for every day more and more convinced me that my happiness was her chief study."

After referring to some domestic arrangements of minor importance, the record proceeds:—

"At this time I knew nothing of the power of religion; but, on the contrary, was deeply ensnared with the dangerous temptations of the world and the flesh. In my external conduct, indeed, I was considered moral and exemplary, but to the spirit of piety I was an utter stranger.

"Frequent intercourse with persons of eminent sanctity, whose friendship I sincerely revered, proved to me, in connection with the declarations of Scripture, that to be in a state of safety for eternity, some renovation of heart, some change of principle, some alteration in my prevailing unholy desires must be necessary. I, therefore, made

feeble efforts to discover the way of salvation. I was unremitting in my attendance on public worship, and I seldom omitted to *say* my prayers; but my love of the pleasures of the world and my *reserve* of sin effectually prevented any fruit from my hypocritical and pharisaical duties. I sincerely wished to be religious, but I was not willing to make the sacrifices it requires. It appeared to me that in giving myself up to religion I must be deprived of many of the pleasures that were essential to my happiness, not being aware that the grace which could enable me to choose 'the one thing needful' would also overcome the unsanctified desires, and give me a taste for more pure enjoyments. I wanted, therefore, to serve two masters—God and mammon. When I prayed that God would give me purity of heart, I almost feared that he would concede to my request! Yet, convinced that there was no true happiness in time, nor any glory in eternity without holiness, I was frequently struggling between the convictions of conscience and the power of sin. Though the power of divine grace was needful to a successful determination, I was unconscious of anything being wanted for obtaining holiness but my own choice; and as that choice was influenced by the power of my darling transgressions, that were dear to me as a right hand or a right eye, I had little chance of choosing aright. My prevailing wish was, nevertheless, to become religious; and in my union with Miss Lockwood, who was not only of pious habits, but had a deep knowledge and experience in religion, and was a member of a dissenting congregation, I was not without hopes that through her assistance and

example I might be reclaimed from the love and practice of sin, and be brought into the knowledge and obedience of the Lord. So that while I habitually lived in sin, knew myself to be in an unconverted state, and at enmity with God—and was aware of my dangerous situation—I sought by every means in my power, save the abandonment of worldly joys, to become a follower of Jesus Christ, and be reconciled to God. But the growth of holiness is incompatible with a life of indulgence and worldly-mindedness. Hence, my anxiety for earthly gratifications and temporal prosperity became augmented, and in like proportion my spiritual desires declined; and it was not until some years afterwards that God by his irresistible grace, working by his providence, subdued my unsanctified pursuits, and turned my heart from the vanities of the world to the enjoyment of communion with himself.

“The father of my wife was a man of such intelligence and exemplary piety as to demand from me more attention than a mere notice. He married early in life a beautiful woman of the name of Richardson. A family rapidly resulted from this union, consisting of three daughters and four sons—all of whom were living at the time of my marriage.

“Mrs. Lockwood died young, soon after the birth of her fourth son. Mr. Lockwood then devoted himself in every interval that business allowed him to the rearing of his family in habits of propriety, refinement, virtue, and religion. Nor was he unsuccessful. After his death the charge of the family devolved on his second daughter, the

partner of my happiness, his eldest daughter having been for some time a wife. Mr. Lockwood was by profession a Dissenter; but originally, from principle, an Episcopalian. His sanctity not being of an ordinary or ostentatious kind, he sought in vain for that food in the Church, where the clergymen were teachers void of religion themselves, which was required for his spiritual wants. He was, therefore, impelled to join a society of Dissenters whose practice and whose preaching were more congenial with his desires. Thus it is that the practice of dissenting from the Church is promoted. The Dissenters take care to appoint only godly men as their ministers, while among Churchmen the piety of the applicant is often a hindrance rather than a furtherance to his admission as a clergyman. A great number, therefore, of those who should be the messengers of Christ are ungodly men; nay, some are notoriously wicked characters, who, by their profaneness, bring a reproach upon the work in which they are engaged. I will venture to assert that such men are the means of *making more Dissenters*, than the combined influence of most of their ministers put together. It is true, a man who regards not the internal nature of religion, may sit under a worldly preacher of dry morality as comfortably, and, indeed, more so than under any other class; but when a man becomes enlightened by the regenerating power of the Spirit of God, he can no longer endure the unsanctified declamations of an unsanctified preacher. If, therefore, there be but one church within his reach, or if the

whole be supplied alike with irreligious men, he of necessity joins the Dissenters.”*

In a marriage tour of some months' duration, Mr. Scoresby visited his parents who were then resident in Greenock. The voyage of 1812 added to his previous successes, “being again,” he says, “the largest cargo brought into the port that season.”

On the 5th of September their first child was born. He was named William, a name which had long been given to the first-born of the family. An incident in reference to this, though it did not occur until two years later, may be mentioned. Mr. Scoresby records it thus:†—

“A visit was proposed to my paternal grandfather who was in a very infirm and declining state of health. As there was little hope of our seeing him alive another year, my father wished my son to be presented to him before he died; and, accordingly, accompanied by my wife, we proceeded to his residence and remained with him a day or two. On this occasion, four persons of the name of William Scoresby, of four successive generations, and in direct line of descent, and each of them first-born sons, sat round his table.”

Of the interval between the voyages of 1812-13, he says,‡—

* He had, at all times, a deep veneration for the Church, and in after years gave himself entirely to her service. *Vide post*, p. 285.

† M.S. Autobiography.

‡ Ibid.

“This appears to have been a year of such marked indolence that I cannot now ascertain how my leisure on shore was occupied. In science, I seem to have done little or nothing; and in the higher knowledge of the gospel I made no advancement. Outward forms of religion were kept up, and family prayer in the morning was occasionally attempted, in which my wife, though naturally receding, took a leading share; but on my part it was a business of formality and a mere soother of conscience. My only communications to any literary or scientific society were two meteorological journals kept in my Greenland voyages of 1811 and 1812. The former was laid before the Wernerian Society on the 22d of November, and published in the second volume of the Societies’ Memoirs, page 155. The latter, including some curious particulars respecting the polar bear, was read on the 16th of January following.”

The autobiography proceeds,—

“The only passing event of the year 1812, of a personal or family nature, that remains to be noticed, was the marriage of my third and youngest sister, Arabella, with Captain Thomas Jackson, *Merchant-navy*, of Whitby. This marriage took place about the end of March. Mr. Jackson was an old school companion and play-fellow of mine in our days of childhood and youth. I had a great respect for his bold and manly spirit, and for his conduct to me on several particular occasions, which was generous and praiseworthy. One instance I shall men-

tion. In some of our boyish sports I was once interrupted and greatly insulted by a young man whose age and strength were too formidable for me to justify myself by that appeal to blows, which was our usual practice in extremities. Jackson took my part, and on a challenge from the angry youth to fight *us both*, undertook (being my senior, and much stouter in person than myself) voluntarily to try the matter first himself, and then, in case of defeat, to turn it over to me. He retired to the fields with a crowd of idle persons in company, and the proposed combatants set to; but after several severely contested rounds of mere hard blows, no defence being attempted, Jackson, though greatly the inferior of his antagonist, both in age and weight, gained a complete victory for himself, and obtained for me a most ample revenge.

“Another circumstance, of a different nature (not personal to me) deserves to be recorded as a manly and benevolent trait and not a little courageous. Soon after Mr. Jackson entered upon the sea service, he was on a voyage to Archangel with an uncle of his, when a boy fell overboard. The ship was going under all sail before a moderate breeze of wind, and instantly left the helpless youth astern. As all the boats were stowed on deck, there was little hope of his being saved by this means; but the captain addressing Jackson, cried ‘*Tom, can you swim?*’ on which he instantly took the hint, threw off his jacket, leapt overboard, and swam to the lad who was just in the act of sinking. He seized him with one hand, and swimming with the other, continued for a little

time to keep himself above water; but the boy beginning to cling about him interrupted his exertions, and they both began to sink. On this, Jackson getting his foot against the boy and exerting all his strength, pushed him off and kept him beyond his reach until he began again to sink. He then seized him by the hair of his head and supported him as before. Meanwhile, although every exertion had been made on board of the ship to get out the boat, it was so long before this could be accomplished, lashed and encumbered as it was, that the vessel had drifted far from the floating lads, and they could no longer be seen. As the boat pushed off, the captain exclaimed it was of no use, they were both lost; but when it approached the spot the crew observed a head above water, and being enabled to grasp him before he sunk, found it was Jackson yet retaining his hold of the now apparently lifeless boy. The boy, however, happily recovered, and Jackson suffered no material injury from the length of time, supposed to be near twenty minutes, that he was in the water, and employed in such powerful exertions."

After ten years' sailing in the *Resolution*,* Mr Scoresby

* The following note, retrospective of the *Resolution's* career, is not without interest:—"Before finally closing my remarks on the *Resolution* I may mention two or three particulars respecting this ship which are remarkable. During the ten years of her *reign* (eight years commanded by my father, and two by myself) she never met with any accident nor suffered the least damage. She never failed each year to return a large profit to the owners (with the exception of one season, when there was a great depression in the oil market),—and she never failed in one instance to exceed all the other ships in the port, averaging seven or eight in number, in her catch of whales, bringing each year the best cargo in the fleet destined for the same port! In these ten voyages we obtained no less than 249

was induced, in 1813, to change to the *Esk*, a fine newly built vessel of the same port. "My reasons for changing my ship were, I now perceive," he says in his autobiography, "not absolutely justifiable. I was partly influenced by private pique towards one of the owners of the *Resolution*, partly by ambitious motives to obtain the command of such a large and finely equipped ship as the *Esk*, and partly by an increase in my wages which, however, had previously been as good as were paid to any captain from the port, and had returned me £912 for my two voyages as commander."

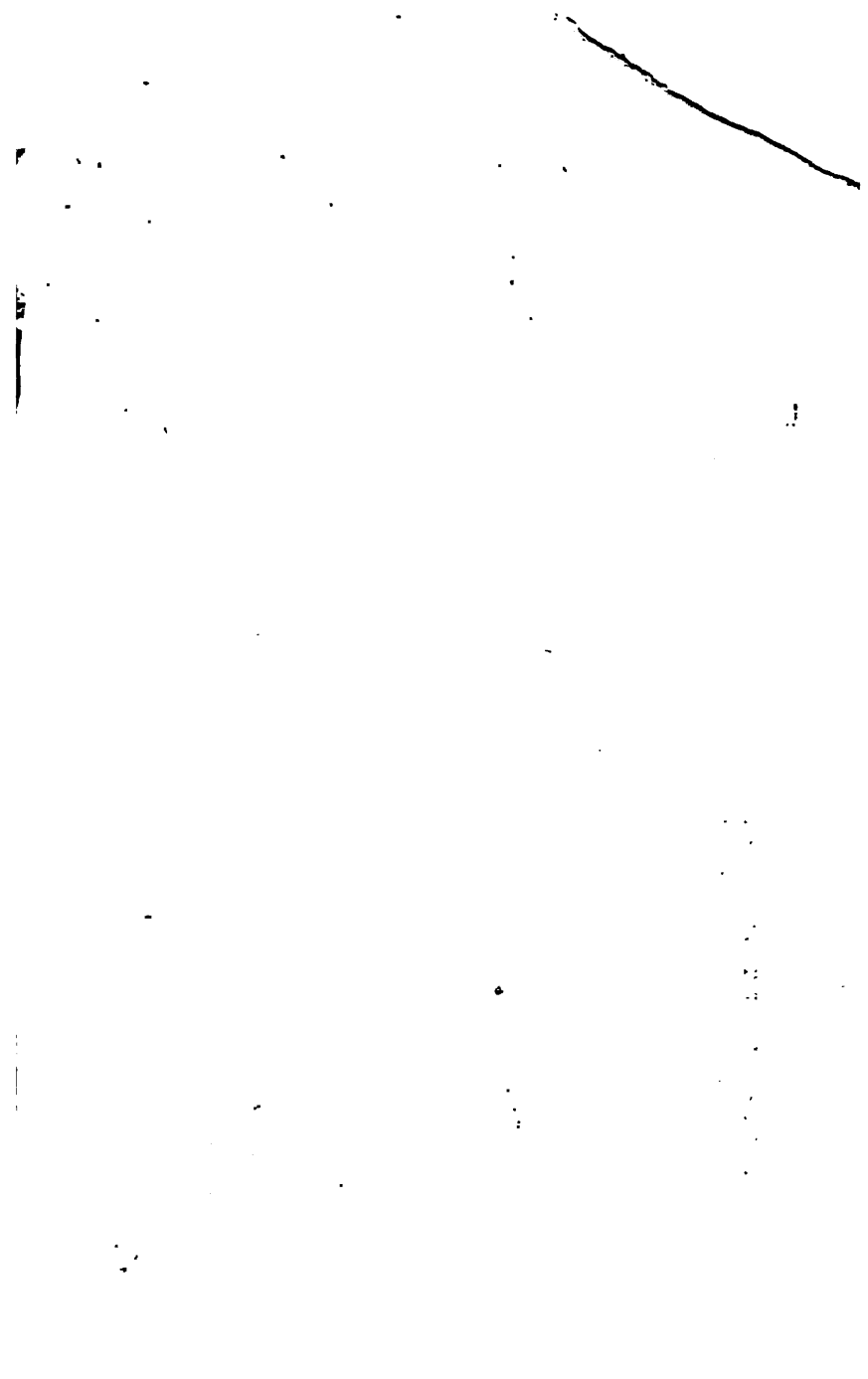
The *Esk* sailed on her first voyage in March 1813. Commercially, the enterprise was again strikingly successful. Mr. Scoresby writes,* "The fishery was in general very indifferent, but I was again favoured with the best success of the port, our fishing being fifteen stout whales, which produced 176 tuns of oil, and yielding the highest freight by near £2000, owing to the deficiency of the catch, that was ever brought into port. The produce of the voyage realized about £10,000, of which about £5500 or perhaps £6000 was profit!"

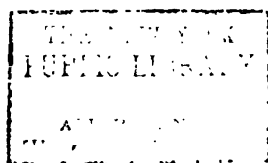
The accompanying sketch, by Mr. Scoresby, represents the dangerous situation of the *Esk* during her besetment from the 10th to the 13th of June: the dotted line marks the intricate passage by which she made her

whales, yielding 2034 tuns of oil, which, with the whalebone, bounty, and premium on capital, produced £70,077, 12s. 8d. The expenses during the same period, including all charges on the ship, with interest of capital invested, amounted to £49,358, 18s. 1d., leaving a clear profit for the proprietor (for an original advance of £8000) of £20,718, 14s. 2d.!"—*MS. Autobiography*.

* *MS. Autobiography*.







escape. In his log-book he remarks, "Thus we providentially had egress from a most dangerous and anxious situation. I say providentially, because in every movement we made, the places closed which we left, and were not observed to slacken again, but became highly more dangerous quarters. The first spot we quitted was met by the heavy windward floe in two hours time, and with such a force that had the ship been there, she must have been crushed to pieces."

The results of a curious series of experiments—which Mr. Scoresby had, from time to time, been making for the purpose of ascertaining the difference of temperature between the water at the surface, and that met with at great depths in these regions—were substantiated during this voyage by a fresh set of experiments made with a beautiful and accurate instrument, provided for the purpose, and named by Mr. Scoresby a **MARINE DIVER**. The apparatus was so arranged that in lowering it to great depths, the water passed through it freely by means of valves opening upwards, one at each end. It was allowed to remain about half an hour at the required depth, in order that it might assume the temperature of the medium in which it floated; then, by hauling rapidly on the line to which it was attached, the apparatus was brought to the surface, containing—in consequence of the pressure of the column of water above it forcing down the valves during its ascent—only the deep-sea water. The temperature was ascertained immediately on its arrival at the surface, excepting in the latter instances in which a Six's self-registering thermometer was sunk with the apparatus.

"By these means," he says, "I obtained the very extraordinary result of a warmer temperature below than at the surface, which was the reverse of all former experiments performed in other parts of the globe. The resulting temperature at the depth of 738 feet was $33^{\circ} 8'$, whilst at the surface it was $28^{\circ} 8'$. Subsequent experiments at depths of 2400, 4380, and 4566 feet showed a difference of 8° , the surface being in all cases the coldest."*

Before sailing on his next voyage, Mr. Scoresby made proposals to the owners of the *Esk* for the purchase of a share of the vessel. Instead of such an arrangement, however, a considerable increase of wages, with a premium of five per cent. upon the value of the oil obtained, was accepted. Of the condition of his mind with respect to a desire after things spiritual, at the time of his setting out on the following voyage of 1814, he speaks very despondingly. His autobiography relates:—

"On this occasion there was a sensible diminution in my desire after the favour of God, and, in consequence, a great falling off of even my former at-

* A full account of these interesting experiments is given in the "*Arctic Regions*," vol. i. p. 187.

The facts here first clearly enunciated have since led to the elucidation of that singular and anomalous phenomenon of the freezing of salt water, whereby it is ascertained that, after it reaches the temperature of $39^{\circ} 5' F.$ it expands in volume till it reaches its freezing point $28^{\circ} 5' F.$ In this way the coldest stratum of water in the frigid zone always mounts to the surface, the temperature increasing in descending. This forms a beautiful arrangement in nature. In these seas the surface alone freezes, and thus forming a thick covering of ice, the water below is protected from the cold air, and prevented from forming a great solid mass, which it otherwise would do did water at a certain point increase in gravity as the temperature decreased.

tention to religious ordinances. Worldly things had obtained a great hold on my attention. My prosperity, so far, had excited the hope of a speedy independence, and encouraged me to think that with a due regard to the improvement of my little property, I might in a few years be able to relinquish an occupation so full of dangers and privations, and for which I had no very decided preference or regard. Hence my chief aim was that of the major part of the world—to get wealth. It was with this view that I solicited a share of the *Esk*—and it was with the same motive that I entered, in the preceding winter, upon the hazardous adventure of under-writing, leaving with a friend letters of attorney to write in my name on all proper risks that should be insured at Whitby. But this state of mind received a slight yet useful check in the early part of the voyage by a series of unfortunate exertions in the fishery, when every ship around us was reaping an excellent harvest; and still more so by our getting *beset* in a hazardous situation among prodigious sheets of ice, where we remained locked up for several days in the very height of the season for whaling. The effect was decidedly profitable to me, however selfish the principle might be from which any increased attentions to religion took their rise.”

A laughable incident occurred during the *besetment*. The ice around, though of sufficient tenacity to entangle the ship where she lay, was, in many parts, so loose in texture as not to permit the passage of a man across it. In these circumstances, Mr. Scoresby conceived the inge-

nious device of ice-shoes, which consisted simply of pieces of deal six feet in length attached by the middle to the foot. Equipped with a pair of these, he pursued a wounded whale ; but, to employ his own words,—

“ I pursued it, on its second appearance, on my ice-shoes, carrying with me a harpoon and dragging a large quantity of line after me, until I fastened the harpoon by sticking it through the ice. Then returning for a lance, I again attacked it ; followed it as it retreated, and in a short time killed it. On one occasion when I was waiting for its return [to the surface] it happened to rise directly under my feet, so as to break the ice all round me, and *lifted me up on its crown!* As I must inevitably have followed it in its descent had I retained my position, I slipped my feet out of the ice-shoes, and, at all risks, ran off to one side. Fortunately, the ice at that spot consisted of two or three folds, and supported my weight until I recovered my shoes.”

During the winter of 1814 a good deal of excitement was caused in the philosophical world, in consequence of a paper read by Mr. Scoresby on two occasions before the Wernerian Society. The subject of the communication was “ *A Description of the POLAR ICE :*” it also comprehended a project for reaching the North Pole by travelling over the ice. The late talented naturalist, Baron von Buch, mentions this paper in a letter* to Gay Lussac. He says:—

* The extract here quoted was published in *Blackwood's Magazine* for November 1817.

"The memoir which I now send you contains a great many facts hitherto very imperfectly known, and makes us acquainted with a part of the globe concerning which we possess very little accurate information. I confess the reading of this memoir interested me extremely. The author, Mr. Scoresby, is a most excellent observer. He has visited the Polar Regions fifteen times, and every year has touched to 80° of north latitude. His private papers contain numerous observations on the temperature of the sea, at its surface, and at different depths. He has devoted much time to the determination of the specific gravity of the water of the different tracts of the ocean which he traversed, and has been careful to bring with him bottles of these waters. Mr. Scoresby is also known as one of the most courageous and skilful of the captains who frequent the Greenland Seas ; he, indeed, is a man worthy of being placed along with a Hudson, a Dampier, and a Cook ; and, if he should ever be placed at the head of a voyage of discovery, I am persuaded that his name will descend to future ages with those of the most able navigators."

This appears to have been the turning point, as it were, in Mr. Scoresby's life. He was conscious that *the pride of life* in his heart was waging war against the *gracious promise of the life that now is and of that which is to come*. Seeking to lay up treasures on earth, his natural heart must needs hover near them, and if at times it would have taken a heavenward flight, it was but as a momentary desire for the bread of the Father's house to

be yielded after a feeble effort for the husks in a foreign land. The success which had followed him in all his undertakings tended to alienate his mind from the thoughts of religion. But the good seed had been planted in his heart; it had been watered from time to time by the teaching of the word of God; but the increase was not yet. It still remained for him to be, *as silver tried in a furnace of earth, purified seven times.*

The voyage of 1815 was Mr. Scoresby's first failure; he only got a medium cargo, where others obtained *full* ships. His journal says,—

“When I returned home my owners expressed tokens of disappointment for the first time. My cargo (9 whales, 130 tuns of oil) for the season was, indeed, fair—the fishery being generally bad. But the circumstances of two Whitby ships which had accompanied me to the southward, having obtained great success after I left them, occasioned a little dissatisfaction with my conduct, which was not sufficiently repressed to prevent my discovering it.

“But this was only the beginning of what the world would term my *change of fortune*. God, in his great mercy, was now beginning to call me by the voice of his providence, which at length was so determinate and irresistible, that his gracious designs in my behalf were accomplished.”

CHAPTER VI.

VISIT TO LONDON—TO SCOTLAND—A TRAVELLING COMPANION—DISASTROUS VOYAGE—THE RISING OF THE DAY-STAR—SIXTEENTH VOYAGE—REFLECTIONS.

1815-1817.

DURING the autumn of 1815, Mr. Scoresby, accompanied by his wife, paid a visit to some friends in London and spent several months there; his visits to Sir Joseph Banks, and the meetings of the Royal Society were the only matters of importance to which he directed his attention. His autobiography contains the following account of his winter movements, together with the episodical fragment incorporated with it:—

“Having thrown away above two months in vanities and idleness, and spent a considerable sum of money in *pleasures* and trifles, we were preparing to return home when I received my father’s command to proceed directly to Greenock. Accordingly we set off about the middle of December, and being desirous of seeing a friend in Newcastle, I took my wife so far, where I left her, and then proceeded to Greenock alone. The business for which I had been sent being comfortably accomplished and adjusted, I returned in a few days to Newcastle by way of Edinburgh.

“Being a high admirer of female beauty, I cannot

omit mentioning here an acquaintance that I made in my journey from Edinburgh to Newcastle, who exceeded in elegance any one I had ever before beheld, or even could conceive of, excepting by the aid of romance. When I entered the coach I found a lady already seated, wrapped up in a white travelling coat, with a female attendant ; but as it was early in the morning and very dark, I had no opportunity of seeing their features. I took a seat on the same side of the coach as the young lady, and gave myself up to the abstraction of thought to which travelling in a coach, at the outset especially, always gives me a propensity. I was disturbed in my meditations by my travelling companion who, having fallen asleep, leaned against me and rested her head upon my shoulder. Being a lady, this unconscious freedom was of course permitted without disturbance ; indeed, totally uninterested as I was in my travelling companion at this moment, I was gratified in being able to conduce in any way to her comfort, and therefore kept myself as quiet as possible, at the expense of some inconvenience, that she might enjoy her repose. As daylight began to advance, I endeavoured to get a peep at the face of my companion, who still slept unconsciously upon my shoulder, when even this partial view discovered a delicacy of complexion I had scarcely ever before witnessed. I was all anxiety to get a better view of her face, when she awoke ; but instead of exhibiting any surprise at the position in which she had rested, she merely apologized with peculiar sweetness of accent, saying, she was afraid she had been very troublesome. I, of course, assured her of the

very reverse, and expressed my satisfaction in being able at all to contribute to her comfort. These remarks afforded an opening for conversation, though in a stage coach no ceremony is considered requisite, and properly so, in addressing those about you. Now I had an opportunity, by the full exposure of daylight, to examine the countenance of my companion, and the more I examined, the more I was astonished at her perfect loveliness. Her features were somewhat small and delicate, but with as much of sharpness, indicative of intelligence, as was compatible with sweetness of expression. She was not a *tame* beauty; but full of character, energy, and animation. What added to the interest of this charming woman was an expressive pensiveness of countenance and indications that, perfect as she was, she had deeply encountered the painful wounds of affliction. The nature of this affliction was indicated by the external marks of mourning which the part of her dress that could be seen did not fail to reveal. To my great surprise, as soon as the sun was fairly up, the morning though cold being beautifully clear, this delicate creature requested the guard to find her a place on the top of the coach. I was at first much disappointed by this inharmonious trait, until I had learned something of the history of the original, when I found it perfectly accordant and expressive of her character.

“Young as she was, only twenty, she was already a widow,—the widow of a soldier. Her husband, Captain H——, fell in one of the hard-contested struggles of the Duke of Wellington, with the armies of France, in the

Peninsula. By her husband,—and, perhaps, by means also of her connections,—her natural warmth and ardour of mind had been turned into heroism of feeling. Though endowed to a degree with the sensibilities of her sex, she had imbibed from him, and through her intercourse with military characters during a residence with the army, such a sense of the *glory* of the profession of a soldier, such an estimate of bravery and contempt of cowardice, as in some respects to supersede the natural and amiable weakness of the female character.

“On my arrival in Newcastle, I was under the necessity of separating from this delightful companion, who in so short an acquaintance made an impression on my feelings that has not to this day worn off. In great raptures, and in the most eloquent language my pleasure could inspire, I described my travelling companion to my wife and the ladies with whom she was staying. They were all anxious to see her. As she had given me leave to call upon her in the morning, I took the ladies with me and introduced them. They all acknowledged that, highly as she had excited their curiosity, she was infinitely more lovely than they had expected.

“It was to be supposed that so much beauty and so much sweetness could not be seen without attracting many admirers. Something of this we saw. When I entered the coach at Edinburgh, a gentleman was in attendance at the door, who took leave of the lady with a degree of melancholy and feeling that particularly struck my attention. This gentleman, so hinted the attendant abigail, was a rejected suitor. His attention, however,

did not stop here; for, having thrown himself into the mail in the evening of the day of her departure, and reached Newcastle before she left, he again, no doubt to her great astonishment, presented himself before her. Of the subsequent history of this interesting woman I have heard nothing. She told me she had been educated in France, and was speedily going thither again; but though I often made inquiry about her, she has ever remained to me but as a vision of the past."

Notwithstanding the many and prolonged interruptions in the interval between the voyages of 1815 and 1816, Mr. Scoresby made some progress in a work subsequently published, and well known as *Scoresby's Arctic Regions*, of the preparation of which he had previously given notice to the Wernerian Society. He spent much time in collating written works, especially those of the Dutch, on the subject, and commenced to write the chronological history.

The voyage of 1816 was most disastrous. Scarcely had the *Esk* entered within the icy confines, when she was met by a terrific storm, which threatened the destruction of all embarked. "In the course of fourteen voyages," says Mr. Scoresby,* "in which I had before visited this inhospitable country, I passed through many dangers, wherein my own life, together with those of my companions, had been threatened; but the present case, where our lives seemed to be at stake for a length of time, exceeding twelve hours, far surpassed in awfulness,

* MS. Autobiography. See also "*Arctic Regions*, ii. 43, *et seq.*

as well as actual hazard, anything that I had before witnessed." Whilst in this dilemma, they descried a gigantic mass of ice bearing down upon them, "as hard as rocks," "at one instant covered with foam, the next concealed from sight by the waves, and instantly afterwards reared to a prodigious height above the surface of the sea." In order to pass this huge barrier, the most acute observation, as well as promptness in directing the vessel, was necessary. A small chink being observed in the hitherto apparently plane surface of the ice, the vessel was directed towards it. A speedy release was thus promised, but, when brought to the point, the vessel refused to *ware*, and the opportunity was lost. A second period of suspense was followed by a dawn of safety; another opening, but smaller and more intricate than the former, presented itself. Happily the ship behaved better on this occasion, and obeyed the directions of her commander, who, in his elevated position at the summit of the top-gallant-mast, was

"Rocked in the cradle of the deep,"

under circumstances altogether subversive of peace of mind. They made their escape on the 2d of May. Subsequently the fishery was prosecuted with tolerable success until the 19th of June, when the misfortune which rendered the rest of the voyage so hazardous was encountered. Whilst manœuvring for a passage amidst some formidable ice-floes, the vessel was directed towards a small indentation in one of the masses, with a view of thus preserving her from the pressure of two huge pieces which were rapidly coming in contact. In this position the *Est* was

subjected to a considerable squeeze, but no serious injury was anticipated. Unfortunately, however, a *tongue*, or submerged piece, of ice of considerable hardness, had, unperceived by those on board, done severe damage; so much so, that when the pressure of the opposed masses relaxed, the ship began to sink. A signal of distress brought many vessels to their assistance, one of which—the *John* of Greenock, commanded by Mr. Scoresby's brother-in-law, Mr. Jackson—never left the *Esk* until fairly within hail of Great Britain. Pumps and buckets were kept hard at work until the extent of the mischief was ascertained. A large piece of the after-keel and a portion of one of the *garboard* strakes, it was found, had been torn away, leaving a large hole through which the water was welling into the ship with insuperable force. A consultation was held for the purpose of considering what measures could be employed for the preservation of the vessel. Many propositions were made. One most extraordinary plan was adopted; it was to *turn the ship upside down*, so as to expose the injured part to the operations of the carpenter. All the stores and moveable furniture having been conveyed to the adjoining ice, the proceedings were commenced on the 30th of June. Ropes were passed beneath the vessel, and attached, on the side farthest from the ice, to the summits of the fore and main-masts, where also were fastened heavy anchors, to assist by gravitation in the proposed rotation of the ship. The vessel having been allowed to sink as far as a number of empty casks in the *hold* would permit, traction was made on the ropes by means of a complex

machinery of blocks, &c., on the ice ; - and a force of upwards of one hundred and fifty men employed with but very little avail, the vessel refusing to careen beyond five or six strakes. At this juncture, Mr. Scoresby proceeded on board with one hundred and twenty men, and having arranged them on the higher side of the deck, caused them to run *en masse* to the lower, giving thereby so sudden a shock to the ship as to make the men apprehensive of an immediate upset. But all their endeavours to bring the keel uppermost were futile; and after many wearying efforts, they were compelled to resort to other measures. The next plan, successfully adopted, was the partitioning of that portion of the ship which was injured from the rest, which was done with great expedition; and, being tightly caulked, formed a strong barrier to the influx of water. For greater security, a *thrumbed* sail—a sail studded with bunches of oakum and rope-yarn—was applied externally, which, being sucked into the leak, tended in a measure to choke it. By this time the crews of those vessels which at first lent their aid had departed in pursuit of their enterprise, the *John* alone remaining in company with the distressed ship. Now arose a difficulty. The *Esk* was not in a condition to travel alone; for, notwithstanding the precautions which had been employed to stop the leak, she was still in a state of jeopardy, and not at all fitted to encounter a heavy sea; so that the sailors, being aware of this, were unwilling to lose sight of the *John*. But the crew of the latter vessel were dependent for their wages upon their success in the fishery, and a large portion of the

fishing season had still to run. In spite of this, however, they offered, in a spirit characteristic of their class, to forego all chance of further success, and to share the fatigue of working the disabled ship home,—stipulating only, and that chiefly for their owners' indemnification, to receive one-half of the cargo which the *Esk* had obtained previous to the disaster; the whole of which, had the *John* deserted her, she must have abandoned. The stores, then, having been returned on board the *Esk*, they cast off from their ice moorings, and set sail for England on the 6th of July. The *John*, whilst she towed the *Esk*, sent also relays of her men to work at the pumps. On the 27th, the *Esk* entered Whitby harbour, to the great joy of her emancipated crew. Mr. Scoresby, in his account of the voyage, concludes as follows:—

“Thus, through the peculiar favour of God, by whose influence our perseverance was stimulated, and by whose blessing our contrivances were rendered effectual, happily terminated a voyage, at once hazardous, disastrous, and interesting.

“Intelligence relative to the distressed state of the ship, and the hopelessness of her situation, reached Whitby the day before us, and involved, in consequence of some exaggerations respecting the loss of the crew, every interested person in deep distress. Throughout the town, and in a great measure, indeed, throughout the neighbourhood, the event was considered as a general calamity. Some of the underwriters on the *Esk*, I was

informed, had offered 60 per cent. for the re-assurance of the sums for which they were liable ; but such was the nature of the risk, as ascertained from the information of some ships' crews by whom we had been assisted, that no one would undertake the re-assurance even at this extraordinary premium.

"The hearty congratulations I received on landing, from every acquaintance, were almost overwhelming ; and these, with the enhanced endearments of my affectionate and enraptured wife, amply repaid me for all the toils and anxieties of mind that I had endured.

"On the tide ebbing out, the *Esk* was left dry, on which, for the first time since the accident, the whole of the water was drawn out of the hold by the pumps. The next tide, the ship was removed above the bridge, to a place of perfect safety, where, the pumps being neglected, the water, in the course of two tides, rose nearly as high within as without. After the cargo was discharged, the ship was put into dock ; and it was found, that excepting the loss of twenty-two feet of keel, left in Greenland, and the removal of a piece of the starboard garboard-strake, nine feet in length, with a portion of dead wood brought home upon deck, no other damage of consequence had been produced by the ice. The main piece of the rudder, indeed, was found to be sprung ; all the rudder works under water, excepting the lowest band, broken ; and the stern-port shaken loose : but these injuries were chiefly sustained when the ship was driven into the ice on the 1st of May. The whole expense of repairs did not, I believe, exceed £200.

"The approbation of my conduct by the owners, Messrs Fishburn and Brodrick, was testified, by their presenting to me a gratuity of £50 ; and the sense entertained by the Whitby underwriters of the preservation of the ship, was pleasingly manifested, by a present of a handsome piece of plate.

"I may add, in conclusion, that the whole of my crew, excepting one individual, returned from this adventurous and trying voyage in safety ; and, in general, in a good state of health. Several of the men, indeed, were affected, more or less, by the excessive fatigue, and by the painful exposure to cold and damp while resting on the ice ; but all of them were, in a great measure, restored before our arrival at home, excepting one man ; he, poor fellow, being of a weak constitution suffered severely, from the inclement exposure, and died soon after he arrived in port.

"The dealings of Providence with me on this voyage were most remarkable. It was a series of difficulties and dangers, and abounded with striking displays of a Divine interposition for our eventual preservation. These various trying circumstances called forth an earnestness, and, occasionally, an energy in my private devotions, (which, however coldly performed, were seldom omitted), such as I cannot but think were in some measure accepted ; yet I am conscious that, generally, my secret reserve of sin was not overcome, nor the subjugation of my own will to that of God accomplished. I began to perceive through these trials the design of Providence : it appeared to me that the object was to turn me from

vanity and the unsubdued love of sin to the love of God. But on my arrival at home the adulation of friends and the universal applause that my successful exertions for saving my ship, under such circumstances that in the opinion of the most experienced captains around she must inevitably be lost, frustrated, as it were, the grace of God, by giving me satisfaction and honour, in place of humility, gratitude, and submission to the Divine will.

“On this voyage more than ever before, I observed the workings of Providence; but my views in regard to it were very partial and imperfect. I erroneously imagined that the Almighty only interposed in the affairs of men in *great concerns*—in affairs of life and death, or prosperity, and other important events. I fancied it was beneath the cognizance of the Almighty to notice the trivial affairs of life; forgetting that a sparrow cannot fall to the ground without him, and the evident fact, that were apparently trivial concerns overlooked, many of the most important circumstances of life, often resulting from such events, could not happen. These errors arose probably from my low idea of the character and perfections of God. Had I had any tolerable conception of his powers and perfections, where the whole is infinite, I must have seen that to direct the affairs of the entire world must be as easy to him as to order the wellbeing of a single individual.

“Notwithstanding that the effects of the providences above detailed were much weakened and injured by the praises of all around me, yet some feeble remains of them

were spared to me. I became more and more convinced of the importance of religion, and of the danger of obstinately resisting the divine will, which was obviously designing my salvation; and these impressions were deepened by the preaching of a *new* clergyman, who had come to officiate at the chapel of ease in Whitby, which had been vacated a little while before. This gentleman, Mr. [afterwards Dr.] Holloway, being of the evangelical party, preached, as appeared to me (who had seldom heard in the church anything but dry morality, and that delivered with total want of feeling in sermons of ten or fifteen minutes), with an energy of manner and a spirituality of matter that made his sermons a new language, and placed religion in a new light. I went to hear him with prejudice; his evangelical preaching and Calvinistic sentiments having rendered him obnoxious to all the good *moral* sort of people, but was deeply impressed under his sermon. I felt a greater willingness to surrender myself unto God than I had ever done before. But the work was far from being accomplished; for though I heard this excellent and zealous servant of Christ frequently afterwards, and often received benefit, I at length became too familiar with his style, and the novelty and earnestness which had first struck me, produced a gradually weaker effect, until at last I attended his ministry with considerable indifference. Occasionally, however, my eyes were open to the truth, and my heart affected; but often my thoughts were altogether wild and wandering, and my devotions dead. Yet the tendency of the occasional awakening was eventually beneficial. Though

unacquainted with the clergyman, I felt a high regard and affection for him which made me long for his acquaintance, with the hope that it might be the means of effecting that renovation and surrender of heart which I was sensible must be yet wanting before I could be said to be 'born again.' Some attempts towards an introduction having failed, when the time of my embarkation for another voyage was drawing nigh, I addressed a note to Mr. Holloway, who resided in the country, about two miles from Whithy, requesting permission to see him. He very kindly called upon me almost immediately. I was rejoiced with his conversation, and charmed with his frank, pleasing and gentlemanly manner. I stated to him my desires after religion—my wish to be a follower of Jesus Christ—the hindrances I met with in all attempts to serve God—and the deficiency of spiritual affections and the power of obedience. I referred him to some hymns of Newton and Cowper, particularly that beginning—

'Tis a point I long to know,
Oft it causes anxious thought,
Do I love the Lord or no?
Am I his or am I not?

"And also that beginning:—

'The Lord will happiness divine
On contrite hearts bestow;
Then tell me, gracious God, is mine
A contrite heart or no?'

"And also the following:—

'I would, but cannot sing,
I would, but cannot pray;
For Satan meets me when I try,
And frights my soul away.'

“Of this hymn I pointed out the fifth and sixth verses as peculiarly expressing my feelings and affording me comfort. They run thus :—

‘O could I but believe !
Then all would easy be ;
I would but cannot—Lord, relieve
My help must come from thee !
But if, indeed, I *would*,
Though I can nothing do ;
Yet the desire is something good,
For which my praise is due.’

“Mr Holloway, from these references, gave me encouragement to believe that God was designing my eternal salvation, and that the work of his Spirit on my heart was begun.

“In every subsequent interview with this excellent man, who soon became an intimate and beloved friend, I found myself encouraged, and saw religion in a favourable light, attended with cheerfulness and evident happiness. The fearful gloom of its professors and their supposed rigid severity were not to be seen in my friend ; he exhibited its effects in their natural and most pleasing colours as being productive of real enjoyment.

“But, after all, the work was not yet complete. I was not yet a branch engrafted into the true vine, nor a sheep of the good Shepherd. I had not entered within the vail. For although I might have been said to be ‘near the kingdom of heaven,’ yet I was not meetened for the pure enjoyment of paradise, not having received ‘a new heart,’ nor the ‘Spirit of Christ.’

“During the interval of my voyages to the whale fishery (1816-17) I continued to prepare manuscript for

my proposed work on the Arctic Regions; but I made no great progress. My labours gave way to every call of ceremony, to every invitation, and to every object however trifling; because there was no stimulus for exertion as to the time of putting the work to press; and every year I found my materials augmenting, and enabling me, the more I delayed, to enrich the work with additional observations and information.

“ On the 1st of March 1817, a paper, entitled ‘Experiments on the Pressure of the Sea at Great Depths,’ was read before the Wernerian Society. This was the only original scientific communication of this winter of which I have any memorandum.

“ I entered upon my sixteenth voyage to the whale fishery (my eighth as captain) on the first of April 1817. Our labours were unsuccessful. Only two whales fell to our share, and a very considerable loss to the owners accrued from this voyage. I narrowly missed situations in which some of the ships that happened to be commanded by raw inexperienced captains obtained full cargoes, and was in company with my father, whilst he got six fish, and we got none! The circumstances of this years’ fishing were perfectly novel. We persevered in the old stations too long and failed. I was, indeed, completely at fault, and, for once, gave up all dependence on my own judgment for near two months together, and followed my father. Hitherto I had always made a practice of acting independently. I avoided, as far as possible, other ships; and, rather than follow a fleet, or proceed in the midst of them, I often struck out a new

path and proceeded alone, though I might, on the whole, prefer the course pursued by the others. In one or two instances this practice proved unfortunate; but generally it was attended with a profitable result; for although we might not meet with so great a number of fish as were found by a fleet, yet, as we had little or no competition, we had a good chance for those we did fall in with.

"Towards the close of the season, accompanied by the *John* of Greenock, and the *Venerable* of Hull, we made a deep stretch into the western ice, which we found open, until we supposed we got sight of the eastern coast of Greenland. But the weather becoming thick, and the season for leaving the fishing station, according to the usual practice, having arrived, perseverance seemed to be hazardous, and we returned, or we possibly might have still made up the deficiencies of our cargo.

"From hence, proceeding southward, we touched at the island of Jan Mayen, and the weather being particularly fine and calm when we stretched in shore, we landed upon it.

"This island, which had rarely been visited of late years, and never scientifically examined, proved extremely interesting. I discovered it to be volcanic, the beach being covered with magnetic iron-sand, and the foot of the cliffs with burnt clay, slag, and lava. Two craters of volcanoes were also discovered and examined. One of them was a fine basin of considerable size. I obtained specimens of rocks and plants, and of animals, as far as we could accomplish their capture.*

* An account of this excursion was read before the Wernerian Society on the

"Unsuccessful as this voyage was as to its leading object, it was far from being unprofitable to me. My religion became of a more decided character, and the nature of sin became more clearly revealed to me. On my passage home, the most complete surrender of heart to God, and the most perfect abandonment of reserved sin that I had ever made occurred. It was on Sunday, the 13th of July, and was the effect, I believe, of reading to the sailors, with more than ordinary attention, a sermon of Mr. Burder, from the text,—‘ And Elijah came unto all the people and said, *How long halt ye between two opinions? If the LORD be God, follow him; but if Baal, then follow him*’ (1 Kings xviii. 21).*

"It was in walking the deck, after divine service, that the application of the subject came forcibly to my conscience. I read it with interest; but God now first applied it to my benefit. And the train of thought being remarkable, deserves to be mentioned.

"I was now nearly approaching home. The view of the English coast, along which we were sailing, produced a train of reflections on expected happiness, checked by the recollection of our scanty cargo, that was productive of much mortification and disappointment to my desire of soon gaining a comfortable independence. Methought God was working against me. My labours for three years had been increasingly unprofitable. They now hardly promised to me the supply of my necessary wants.

6th of December following, and the paper was published in the "Edinburgh Philosophical Journal," vol. i., p. 121. See also "Arctic Regions."

* Burder's "Village Sermons," vol. v., sermon viii., p. 85.

‘I will leave off the sea,’ thought I; ‘the little property I have acquired will produce £120 or £150 a year, and on this, with any accidental acquisition from finding out other employment, I may live, in an economical manner at least, entirely on shore. I shall then be no longer exposed to *the freaks of fortune*, but shall defy all casualties and mortification of unsuccessful voyages, and may have the continued enjoyment of domestic intercourse and blessings of the land.’ But my conscience smote me; it suggested, it was not owing to the freaks of fortune that I was no longer prosperous; it was the hand of God; and although I should retire from the sea that hand could reach me there, reduce me to beggary, and blast all my schemes of happiness, formed independent of my Maker.*

“It was now that the sermon of Burder was fully applied to my conscience. I found I was one of those halting between two opinions; I was maintaining a reserve of sin, or refusing the complete surrender of myself to God. My irresolution was manifest to me. I

* “O Lord, thou hast searched me, and known me. Thou knowest my down-sitting and mine up-rising: thou understandest my thought afar off. Thou compassest my path, and my lying down, and art acquainted with all my ways. For there is not a word in my tongue, but, lo, O Lord, thou knowest it altogether. Thou hast beset me behind and before, and laid thine hand upon me. Such knowledge is too wonderful for me; it is high, I cannot attain unto it. Whither shall I go from thy Spirit? or whither shall I flee from thy presence? If I ascend up into heaven, thou art there: if I make my bed in hell, behold, thou art there. If I take the wings of the morning, and dwell in the uttermost parts of the sea; even there shall thy hand lead me, and thy right hand shall hold me. If I say, Surely the darkness shall cover me; even the night shall be light about me. Yea, the darkness hideth not from thee; but the night shineth as the day: the darkness and the light are both alike to thee.”
—Ps. cxxxix. 1-12.

was one of the persons described under the first head of the discourse ; being irresolute and undetermined whether to be religious or not. To the question suggested by the text—'if the Lord be God?'—my heart and experience answered, 'The Lord he is God—the Lord he is God.' And the command—'Then follow him'—was impressed on me with such force, by the Spirit of God, I doubt not, that for the first time in my life I felt disposed to make a total surrender of myself, and give myself up unto God.

"These impressions were not entirely transitory, yet they were not perfectly effectual. One act of providence remained to complete the work ; and that act, in the form of chastisement and loss of property, was soon administered.*

"On my arrival at home I found the owners of the ship not altogether satisfied with my success and exertions. They said it was a cruel thing for me to follow my father all the season, and thus lose the chance of success, which a separation of the two ships, the *Esk* and *Mars*, their entire property, would have afforded, at least to one of them. But this was not all. My father, who commanded the *Mars*, succeeded much better than I did; but he had some disturbance with his crew, and had been annoyed with several acts of obstinate disobedience, which he was disposed to punish by withholding the wages of the offenders, agreeable to law, and paying them into Green-

* By the bankruptcy of an individual to whom, in friendship and without efficient security, he had lent upwards of £1500, nearly the whole of his property. About one half of the sum he subsequently recovered.

wich Hospital. The owners, however, refused their sanction to this measure, though obviously important for preserving any sort of good government on board of their ships, and declared their determination not to be troubled with any quarrels, but to pay the men their wages and dismiss them. My father felt himself so aggrieved by this refusal of support from the owners of the ships, that he immediately gave up his command. I, for the same reason, together with the apparent want of approbation of the owners respecting myself, and some little circumstances in their conduct that were rather unpleasant to my feelings, also gave up my command. It was done, however, without any further unpleasantness; and my chief mate, whom I recommended to them as a suitable person to take charge of the ship, was appointed her captain.

“It will have been observed that I experienced in my various voyages to Greenland, and even before I entered this hazardous service, a number of striking deliverances from premature death. The hand of God was clearly manifested in these. The train of providences in my experience were even such as my own understanding perceives to have been necessary for producing the end designed. Without that order the effect could not have been produced. My extraordinary diffidence when I first undertook the command of the ship was such, that had I failed of success, as I did latterly, I should never have looked to the cause as providential, but as the result of my own deficiencies and want of ability. But after my talent as a fisherman had been fully established

by several years of great success, generally exceeding all my competitors out of the same port, it was impossible that I should not become in some degree sensible of what every one was ready to allow. This feeling being established, I did not attribute my first and subsequent failures to inefficiency.

“ Finding many inexperienced captains exceeding me more than once, for whose talents and activity I had great disrespect, if not contempt, a feeling of self-sufficiency (though never amounting to presumptuousness) induced me first to attribute my failure to ‘ bad luck,’ a principle which the credit of my early voyages would not allow me until this time to admit. But when, examining the probabilities of chance, year after year became more unprosperous, and each season marked by extraordinary circumstances, I was at length aroused to acknowledge the truth, often forced upon my conscience, that it was God who was hedging up my way and preventing my success. Thus my eyes became gradually opened. But when I had clearly seen the designs of the Lord, and still withheld the surrender of my darling sins unto him, other means and trials became necessary. I was cast into dangers and extraordinary difficulties ; they marked the chastisements of God, and I was led to more than ordinary prayer. He delivered me, and I was led to acknowledge his mercy. Still the work was incomplete ; for, like Jonah, I would have fled from the presence of God, by leaving my duty and my profession, and hiding myself. But whilst Jonah, for his recovery, was arrested by a dangerous tempest, and exposed to drowning in the sea—

the refuge he had sought from the presence of God—I was overtaken by unexpected trials and loss of my property on shore, where I supposed I was secure from all casualties whatever. Thus, by the grace of God, truly all things have worked together for my good. Goodness and mercy hath followed me all the days of my life.”

CHAPTER VII.

REVIVAL OF THE ARCTIC EXPEDITIONS—CORRESPONDENCE WITH SIR JOSEPH BANKS—VOYAGE OF 1818—SPITZBERGEN—THE COLOUR OF THE GREENLAND SEA—BIRTH OF HIS SECOND SON.

1817-1818.

WE turn again for a little to the consideration of some circumstances connected with the secular concerns in which Mr. Scoresby was employed. By this time he had attained a marked position amidst the votaries of science, by whom he was regarded as an authority in all matters relative to the Polar Regions. He had for some time been in the habit, on his return to England, of communicating any interesting events which might have occurred during the voyage to the leading men both in London and Edinburgh. With Sir Joseph Banks in the one metropolis, and Professor Jameson in the other, he held frequent correspondence. Out of one of his letters to Sir Joseph Banks, bearing date 2d October 1817, arose that concatenation of modern expeditions in search of a *per* glacial navigation from the Atlantic to the Pacific, which has given to British sailors a reputation for courage, endurance, and discipline such as no other service could have established.

In a touching memoir* of the lamented Franklin, M. de la Roquette, after speaking of the more remote Arctic

* Addressed, in 1858, to the Geographical Society of France.

expeditions, goes on to relate the circumstances which gave rise to those of more recent date. He says,*—

“However beneficial the solution of such a question might be considered in a commercial point of view, it was long neglected; and, in spite of the discoveries, in Arctic seas, of Barentz, Heemskerke, Davis, Hudson, Baffin, and others, was, so to speak, almost forgotten, when an English whaler, an intelligent and intrepid sailor, who had for many years navigated the Greenland seas, demonstrated the possibility of effecting it. In a letter written by him to Sir Joseph Banks, this whaler—Scoresby the younger—in relating to the illustrious philosopher some observations which he had been induced to make, described a remarkable circumstance which he had witnessed during his last voyage in 1817.

“ . . . This statement of Scoresby, together with analogous observations on a similar disruption or removal

* “ Quelque avantageuse que l'on supposât devoir être pour le commerce la solution d'une semblable question, elle fut longtemps négligée, et pour ainsi dire presque oubliée, malgré les importantes découvertes faites dans les mers Arctiques par les Barentz, les Heemskerke, les Davis, les Hudson, les Baffin, &c., lorsqu'un simple baleinier Anglais, marin intelligent et intrépide, qui naviguait, depuis plusieurs années, dans les mers du Gröenland, en indiqua la possibilité. Dans une lettre, écrite par lui à Sir Joseph Banks, ce baleinier, Scoresby le Jeune, en rendant compte à l'illustre savant des observations qu'il avait été à portée de faire, lui signala un fait remarquable dont il avait été témoin lors de son derniers voyage, en 1817.

“ . . . Cet exposé de Scoresby et des observations analogues sur de semblables brisements ou écartements de l'immense barrière de glace, faites en 1816 et 1817 dans les parages de l'Islande et près des côtes orientales du Gröenland, firent revivre en Angleterre les anciens projets, qui semblaient perdus de vue depuis tant d'années, d'explorations dans les mers Arctiques pour atteindre le pôle nord, et ouvrir un passage d'un océan à l'autre. L'amirauté prêta l'oreille aux suggestions de Sir John Barrow, déjà connu par un voyage au Spitzberg, appuyées par Sir Joseph Banks, président de la Société Royale, et prépara en conséquence, au commencement de 1818, deux expéditions distinctes.”

of the immense barrier of ice, made in 1816 and 1817 in the parallel of the island and near the eastern coast of Greenland, awakened in England the long dormant projects for attaining the North Pole, and for opening up the North-west Passage. The Admiralty listened to the suggestions of Sir John Barrow, already known by a voyage to Spitzbergen, supported by Sir Joseph Banks, president of the Royal Society, and, in consequence, prepared, in the beginning of 1818, two distinct expeditions."

Twenty-three years previous to the publication of these remarks by M. de la Roquette, namely, in 1835, Sir John Ross made a similar statement in the preface to a published account of one of his voyages. He, like M. de la Roquette, claimed for Mr. Scoresby some merit in the resuscitation of Arctic expeditions. This generous acknowledgment gave umbrage to certain reviewers who charged Sir John with wilful misrepresentation; and it was in reply to these unjust censures, and with a view of vindicating the truthfulness of his assertions, that Mr. Scoresby addressed to the editor of the *Edinburgh New Philosophical Journal* the letter, from which the following extracts are taken:—

"My personal participation in the revival of the subject in question was commenced by a letter addressed to Sir Joseph Banks, from whom I had received many marks of kindness, and with whom, for many years, I was in the habit of corresponding.

"In that letter, written from Whitby, and bearing the

date, 2d of October 1817, I mentioned the fact of a large body of the usual ices having disappeared out of the Greenland Sea, and the consequent openness of the navigation towards the west, whereby I was enabled to penetrate within sight of the eastern coast of Greenland, to a meridian which had usually been considered as having become totally inaccessible. After some account of the state and configuration of the ice, and our progress amongst it, I proceeded to remark on the facilities which on this occasion were presented for making researches in those interesting regions. The examination of the coasts of both Spitzbergen and Greenland—the determination of the fate of the ancient colony established by the Icelanders in the latter—explorations affecting the improvement of our whale fishery—and *researches towards deciding whether or not a navigation into the Pacific by a north-east or north-west passage existed*,—were among the subjects suggested as the most interesting and important. I also expressed a wish to be employed in such researches through a series of voyages, that the most favourable seasons might be improved to the best advantage, and that the most complete investigation might be accomplished; and by the way of avoiding unnecessary expense, I proposed to combine the object of the whale fishery with that of discovery on every occasion when the situation of the ice was unfavourable for research.

“Whether it was in consequence of this letter or not, it becomes not me, perhaps, to hazard an opinion; but there can be no impropriety in stating what actually occurred, namely, that, in the latter end of November

(about seven weeks, I believe, after my letter to Sir Joseph Banks was despatched), a notice appeared in the public prints of the day, 'that, owing to the statements of the *Greenland captains* respecting the diminution of the polar ice, the Royal Society had applied to ministers to send out vessels for discovery in the Polar Seas.'

"In the beginning of December I addressed another letter to Sir Joseph Banks, submitting an outline of objects for research, classed under these several heads: Investigations for the advancement of geography, commerce, and science. Under the latter were suggested as matters of interest, meteorology, including observations on atmospherical electricity, hydrography, or natural history of the sea, comprising experiments and observations on its depth, currents, saltness, and temperature, both at the surface and at considerable depths; botany, geology, magnetism, including observations on the variations of the compass, on the magnetic anomaly (or deviation), on ship-board, and on the magnetic intensity.

"Just before this letter was forwarded, my father, who was then in London, and had several conversations with Sir Joseph Banks and other gentlemen, who were anxious for the success of the intended expeditions, was advised by them, and particularly by Sir Joseph Banks, to send for me, with the view of my being employed in this interesting service. Accordingly, I left Whitby on the 11th of December, and proceeded direct to London, where I had an interview with Sir Joseph Banks, who, after a kind expression of his regret that he had not been able to obtain for me, as his anxious wish was, a com-

mand in one or other of the projected expeditions, referred me to Mr. Barrow for the plan on which they were to be appointed. In the course of a brief conversation with the latter gentleman, I was told that if I wished to accompany either of the expeditions, I must give in my proposals to the Navy Board. Finding, however, it was a fixed point that the command of all the vessels then designed for discovery should be given to officers of the royal navy, I at once decided; not being disposed to engage in a subordinate capacity, on foregoing the satisfaction I had in some degree anticipated."

After referring to some inaccuracies in the criticism which called forth his remarks, Mr. Scoresby proceeds to give extracts from his letter to Sir Joseph Banks, together with the replies of the worthy baronet.

"After some observations not particularly bearing on the subject in question, the letter states,—'I found, on my last voyage, about 2000 square leagues of the surface of the Greenland Sea, included between the parallels of 74° and 80° north, perfectly void of ice, which is usually covered with it. Now, all this ice has disappeared within the last two years, and there is little doubt but it has been drifted to the southward into warmer climates, and there dissolved.'

"After a description of the progress made towards the coast of Greenland, &c., already mentioned, the letter proceeds:—

"Had I been so fortunate as to have had the com-

mand of an expedition for discovery instead of fishing, I have little doubt but that the mystery attached to the existence of a north-west passage might have been [I should have added "in some measure"] resolved. There could have been no great difficulty in exploring the eastern coast of Greenland, and probably the fate of the colony established by the Icelanders so many centuries ago might have been ascertained. *I do conceive there is sufficient interest attached to these remote regions to induce Government to fit out an expedition, were it properly represented.* The simple examination of the shores of Spitzbergen would be a matter of much interest to the naturalist and geologist.

"I should have much satisfaction in attempting an enterprise of this kind, namely, to examine and survey the islands of East Greenland or Spitzbergen, especially the eastern part, which has not been visited [for] many years past; and to ascertain, for the benefit of the whalers, whether the whales resort thither;* to endeavour to reach the shore of West Greenland, determine its position, prove its insularity, and ascertain the fate of the Icelandic colony, together with making researches [contemplating a continuation of the exploration through a series of years] relative to the north-east and north-west passages, &c.; for the performance of which objects, I could point out a method by which the enterprise could be conducted with little, or possibly no expense to the

* "Both my father and myself, in the course of last voyage, attempted, though unknown to each other, to explore the eastern part of Spitzbergen; but meeting with more ice than is usual in this quarter, our navigation was interrupted."

nation. This would be accomplished by combining the two objects of discovery and fishing.

“‘Since no one can possibly state [that is, from observation on the condition of the ice in any one season] what opportunity may occur on a subsequent occasion for pursuing a voyage of discovery, it would be well to have this reserve for the reduction of the expenditure, in the event of the opportunity for discovery failing.

“‘I conceive that an expedition, consisting of two ships, might be fitted out, and all expenses defrayed, for the sum of £5000 to £6000.* But in case of any whales being taken—and the fishery might occasionally be prosecuted without [particular] detriment to the other object of the voyage—the expenses would be proportionably reduced, and might, possibly, be altogether defrayed thereby.’

“Such are some of the particulars included in my letter to Sir Joseph Banks,—a letter written many weeks before any public intimation was given of the intention of Government to undertake a renewal of the long-abandoned enterprise of Polar researches. A reply to this letter was received towards the end of October, franked by Mr. Barrow, of which the following is a copy :—

“‘SOHO SQUARE, Oct. 26, 1817.

“‘DEAR SIR,—I beg you to accept my best thanks

* “‘This off-hand estimate was not meant to include the owners’ remuneration for the use of their ships, but the mere outlay for equipment, provisions, and wages.”

for your very intelligent letter, and for your "Treatise on the Northern Ice," which has given me a new and far more precise idea of the circumpolar seas than I had before.

"You are aware, no doubt, that an Act of Parliament (16th Geo. III., c. 6) offers a reward of £20,000 for the discovery of a north-west passage, and £10,000 for the ship that shall first reach the 89th degree of north latitude.

"These rewards have not produced a single effort on the part of any whale-fisher to accomplish either of these great purposes; allow me to ask your opinion whether an Act offering £1000 for the reaching every degree of latitude from eighty-two to the pole, would be likely to induce the masters of ships to make a trial to reach at least some of the unknown degrees of latitude.

* * * *

"I am, sir, your obliged and faithful servant,

"JOS. BANKS."

"About three weeks after the receipt of this letter, a second, of which I also give a copy, came to hand:—

"SOHO SQUARE, Nov. 17, 1817.

"DEAR SIR,—I hope you have received my letter of October 26, in which I thanked you for the present which you were so good as to make to me of your "Essay on the Ice of the Seas about Spitzbergen and Iceland." The more I have considered the facts stated in it, the more I am convinced that the information given in it to

the public for the first time, is likely to lead to results highly advantageous to maritime science.

“Major Rennell, who has written so much and so ably on the currents in the ocean, is much pleased with your essay. If you could spare a copy as a present to him, he will, I am sure, be very thankful. In that case be so good as to direct it to me.

“Allow me to inquire of you what the quantity and nature of the *drift-wood* found on the coast of Spitzbergen is? I think all who have visited that country agree that it is found on the shores in sufficient abundance to supply fuel for melting their blubber into oil.

“On the comparative quantity of drift-wood on the west coast of Greenland, and on that of Spitzbergen, some conjecture may be grounded respecting the probability of the current which sets to the southward in Davis’ Strait, and on the east side of Greenland, taking its origin in the east or the west. I do not recollect any drift-wood coming on shore on the coast of Labrador. The abundance is found on West Greenland, which argues a current from the west.

“It appears from your essay that islands of ice are uncommon in the seas of Spitzbergen; they, however, I conclude, sometimes occur.

“I hope you proceed directly with your intended work on the Polar Seas: I am impatient to see it, after having so much profited by your essay.

“I beg my best compliments to your father, and am, sir, your obliged and faithful servant,

“JOS. BANKS.”

"Besides these two letters, I had much additional correspondence with Sir Joseph Banks, in which the Polar expeditions formed an occasional topic; but as my chief communication with Sir Joseph, expressly on the subject of these expeditions, was by personal conversations, the documentary evidence on the question of the revival of Arctic research is principally found in the letters above given."

Mr. Scoresby proceeded from London, after his interview with Sir Joseph Banks, to Liverpool, where he was engaged in fitting out the *Fame*—a teak-built vessel, which his father had purchased—for the ensuing season. It was during this visit to Liverpool that he became acquainted with Professor Traill, "who," he says, "afterwards became my most intimate, kind, and warmly-attached friend." From Balta Sound, where the *Fame* put in to complete her crew, Mr. Scoresby wrote again to Sir Joseph Banks, expressing his opinion as to the result of the expeditions for research. The following extracts express his thoughts on the subject:—

"As the expeditions for discovery in the Polar Seas have excited so much interest with the public, it may not be amiss to offer an opinion as to the probability of success.

"Though the Polar Seas were navigable in an uncommon degree last summer, I conceive it very uncertain whether the ice may yet remain the same, and whether the navigation of these seas still continues equally open.

Hence some uncertainty must attach to every attempt, though it seems probable they may be able to examine the entire coast of West Greenland, to determine its insularity, and, consequently, the existence or non-existence of Baffin's Bay. But as to reaching the *Pole*, I confess myself sceptical. From what I have observed, I imagine probabilities are against their penetrating beyond 82° or 83° , and I readily allow I shall be *much* surprised if they should pass the eighty-fourth degree of latitude.

"The success of the expedition intended for the north-west is still more equivocal. Indeed, the nature of that voyage is wrapped in so much uncertainty, that, in my opinion, it cannot warrant even a conjecture. *I am persuaded a north-west passage exists—that is, as regards any obstruction from land; but how far it may or may not be blocked up with ice, so as to be always imperious, can only be determined by repeated trials.*

* . * * *

"BALTA SOUND, 17th April 1818."

The expedition in search of the north-west passage, under Captain Ross, merely confirmed the statements of Baffin with respect to the bay named after that deserving navigator, nothing further being attempted, greatly to the disappointment of those who were instrumental in despatching the expedition. The Polar expedition, under command of Captain Buchan, proceeded but little beyond the parallel of 80° , where it got beset, and was rendered useless during the best part of the season. When released, the vessels encountered a violent storm, which

caused so much damage as to warrant Captain Buchan's return home without effecting anything.

Although Mr. Scoresby would have rejoiced in an appointment wherein he might have had more leisure for purely scientific pursuits, he by no means despised the opportunities which occurred to him of prosecuting his favourite study during such intervals of inactivity in regard to the fishery as the voyage from time to time presented. The *Fame* sped on her way towards the regions of perpetual ice, and arrived on the fishing-ground at the usual period in the summer of 1818. The result of the fishery was but "indifferent prosperous;" yet, from the meagreness of the general catch, the *Fame* made a profitable voyage. Some circumstances, however, apart from commercial interest, made the enterprise more than ordinarily attractive. A brief sketch* of an adventure in Spitzbergen may be related as one of these, in which he says, "I made collections in botany and mineralogy, and obtained some zoological specimens." Mr. Scoresby landed, with fourteen of his men, on the 23d of July, at seven o'clock in the evening. The weather was "beautifully clear," and everything appeared favourable to a pleasant excursion. After speaking of the flat of land near the shore, he proceeds to relate their progress up the mountains :—

"The first hill rose at an inclination of 45° , to the height of about 1500 feet, and was joined on the north side to another of about twice the elevation. We began

* For a more detailed account *vide* "Arctic Regions," i. 92, *et seq.*

to climb the acclivity on the most accessible side, at about 10 P.M., but from the looseness of the stones and the steepness of the ascent, we found it a most difficult undertaking. There was scarcely a possibility of advancing by the common movement of walking, for in this attempt the ground gave way at every step, and no progress was made, hence the only method of succeeding was by the effort of leaping or running, which, under the peculiar circumstances, could not be accomplished without excessive fatigue. In the direction we travelled, we met with angular fragments of limestone and quartz, chiefly of one or two pounds' weight, and a few naked rocks protruding through the loose materials of which the side of the mountain, to the extent it was visible, was principally composed. These rocks appeared solid at a little distance, but on examination were found to be full of fractures in every direction, so that it was with difficulty that a specimen of five or six pounds' weight, in a solid mass, could be obtained. Along the side of the first range of hills near the summit, was extended a band of ice and snow, which, in the direct ascent, we tried in vain to surmount. By great exertion, however, in tracing the side of the hill for about 200 yards, where it was so uncommonly steep that at every step showers of stones were precipitated to the bottom, we found a sort of angle of the hill free from ice, by which the summit was scaled.

"Here we rested until I took a few angles and bearings of the most prominent parts of the coast; when, having collected specimens of the minerals, and such few plants as the barren ridge afforded, we proceeded on our

excursion. On our way to the principal mountain near us, we passed along a ridge of the secondary mountains, which was so acute that I got across it with a leg on each side, as on horseback. One side of it made an angle with the horizon of 50° , and the other of 40° . To the very top it consisted of loose, sharp limestones, of a yellowish or reddish colour, smaller in size than the stones generally used for repairing high roads, few pieces being above a pound in weight. The fracture appeared rather fresh. After passing along this ridge about three or four furlongs, and crossing a lodgment of ice and snow, we descended by a sort of ravine to the side of the principal mountain, which arose with a uniformly steep ascent, similar to that we had already surmounted, to the very summit. The ascent was now even more difficult than before; we could make no considerable progress but by the exertion of leaping and running, so that we were obliged to rest after every fifty or sixty paces. No solid rock was met with, and no earth or soil. The stones, however, were larger and appeared more decayed, and were more uniformly covered with black lichens; but several plants of the *saxifraga*, *salix*, *draba*, *cochlearia*, and *juncus* genera, which had been met with here and there for the first two thousand feet of elevation, began to disappear as we approached the summit. The invariably broken state of the rocks appeared to have been the effect of frost. On calcareous rocks, some of which are not impervious to moisture, the effect is such as might be expected; but how frost can operate in this way on quartz, is not so easily understood.

"As we completed the arduous ascent, the sun had just reached the meridian below the Pole, and still shed his reviving rays of unimpaired brilliancy on a small surface of snow which capped the mountain's summit. A thermometer placed among stones in the shade of the brow of the hill indicated a temperature as high as 37° . At the top of the first hill the temperature was 42° , and at the foot, on the plain, 44° to 46° ; so that, at the very peak of the mountain, estimated at 3000 feet of elevation, the power of the sun at midnight produced a temperature several degrees above the freezing point, and occasioned the discharge of streams of water from the snow-capped summit.

"The form of the mountain summit which I visited is round backed, the area of the part approaching the horizontal position not being above a quarter of an acre. The south side, where we ascended, and the south-east, are the only accessible parts; the east, north, and west aspects being precipitous nearly from top to bottom. What snow still remained on the summit was but a few inches deep, and appeared to be in a state of rapid dissolution; the sides of the hill were almost entirely free from snow. The masses of stone on the brow of the mountain were larger than any we had yet met with; the fracture was less fresh, and they were more generally covered with lichens.

"From the brow of the mountain, on the side by which we ascended, many masses of stone were dislodged by design or accident, which, whatever might be their size, shape, or weight, generally made their way with

accelerated velocity to the bottom. As they bounded from rock to rock, they produced considerable smoke at each concussion; and setting in motion numerous fragments in their course, they were usually accompanied by showers of stones, all of which were lodged in a bed of snow lying 2000 feet below the place where the first were disengaged. This may afford some idea of the nature of the inclination. Most of the larger stones which were set off broke into numbers of pieces; but some considerable masses of a tabular form wheeled down upon their edges; and though they made bounds of several hundred feet at a time, and acquired a most astonishing velocity, they sometimes got to the bottom without breaking.

“The prospect was most extensive and grand. A fine sheltered bay was seen on the east of us, an arm of the same on the north-east, and the sea, whose glassy surface was unruffled by a breeze, formed an immense expanse on the west; the icebergs, rearing their proud crests almost to the tops of the mountains between which they were lodged, and defying the power of the solar beams, were scattered in various directions about the sea-coast and in the adjoining bays. Beds of snow and ice filling extensive hollows, and giving an enamelled coat to adjoining valleys,—one of which, commencing at the foot of the mountain where we stood, extended in a continued line towards the north as far as the eye could reach; mountain rising above mountain, until by distance they dwindled into insignificancy; the whole contrasted by a cloudless canopy of deepest azure, and enlightened by the

rays of a blazing sun, and the effect aided by a feeling of danger, seated as we were on the pinnacle of a rock, almost surrounded by tremendous precipices,—all united to constitute a picture singularly sublime. Here we seemed elevated into the very heavens; and though in a hazardous situation, I was sensible only of pleasing emotions, heightened by the persuasion that, from experience in this kind of adventure, I was superior to the dangers with which I was surrounded. The effect of the elevation and the brightness of the picture were such that the sea, which was at least a league from us, appeared within reach of a musket-shot; mountains a dozen miles off seemed scarcely a league from us; and our vessel, which we knew was at the distance of a league from the shore, appeared in danger of the rocks.

“After a short rest, in which we were much refreshed with a gentle breeze of wind that here prevailed, and after we had surveyed the surrounding scenery as long as it afforded anything striking, we commenced the descent. The task, however—which, before the attempt, we had viewed with indifference—we found really a very hazardous, and, in some instances, a painful undertaking. The way now seemed precipitous. Every movement was a work of deliberation. The stones were so sharp that they cut our boots and pained our feet; and so loose that they gave way at almost every step, and frequently threw us backward with force against the hill. We were careful to advance abreast of each other, for any individual being below us would have been in danger of being overwhelmed with the stones which we unintentionally dis-

lodged in showers. Having, by much care, and with some anxiety, made good our descent to the top of the secondary hills, to save the fatigue of crawling along the sharp ridge that we had before traversed, we took down one of the steepest banks, the inclination of which was little less than fifty degrees. The stones here being very small and loose, we sat down on the side of the hill, and slid forward with great facility in a sitting posture. Towards the foot of the hill an expanse of snow stretched across the line of descent. This being loose and soft, we entered upon it without fear, and our progress at first was by no means rapid; but on reaching the middle of it, we came to a surface of solid ice, perhaps a hundred yards across, over which we launched with astonishing velocity, but happily escaped without injury. The men whom we left below viewed this latter movement with astonishment and fear.

“On the flat of land next the sea we met with the horns of rein-deer, many skulls and other bones of sea-horses, whales, narwhales, foxes and seals, and some human skeletons laid in chest-like coffins, exposed naked on the strand. Two Russian lodges, formed of logs of pine, with a third in ruins, were also seen; the former, from a quantity of fresh chips about them and other appearances within them, gave evidence of their having been recently inhabited. One of them, though small, seemed a middling kind of lodging, but smelt intolerably of the smoke of wood and steam of oil. Many domestic utensils were within and about it. A new hurdle lay by the door; and traps for foxes and birds were scattered along the

beach. These huts were built upon the ridge of shingle adjoining the sea.

"Among the shingle on the beach were numbers of nests, containing the eggs of terns, ducks, and burgomasters, and in some of them were young birds. One of the latter, which we took on board, was very lively, and grew rapidly; but having taken a fancy to a cake of white lead, with which the surgeon was finishing a drawing, he was poisoned. The nests were all watched by the respective birds they belonged to; which, with loud screams and bold attacks, defended them from the Arctic gulls and other predatory birds that hovered about the place. They even descended within a yard or two of some of the sailors, who were so cruel as to take their eggs or young, and followed them for a considerable time, screaming most violently. Several of these eggs were afterwards hatched in warm saw-dust, but the young birds generally died soon after they left the shell.

"The only insect I saw was a small green fly, which swarmed upon the shingle about the beach. The sea along the coast teemed with a species of helix, with the *clio borealis*, and with small shrimps. But no animal of the class *Vermes* was seen on the shore. The birds seen were the puffin, tern, little auk, guillemot, *black* guillemot or *tyste*, kittiwake, fulmar, burgomaster, Arctic gull, brent goose, eider-duck, crimson-headed sparrow (*Fringilla flammea*), sand-piper, &c.; but no living quadruped was observed.

"Drift-wood was seen in some abundance; but all of it seemed to have lain long on the beach, being 'much

battered and bleached, and some of it was worm-eaten.

“ A strong north-west wind having recently prevailed, the shore was in many places covered with deep beds of sea-weed. Among these we distinguished the *Fucus vesiculosus*, *esculentus*, *saccharinus*, *filum*, *plumosus*, *sinuosus*, *clavellus*, &c., and some species of *Conferva*.”

On another occasion Mr. Scoresby was led to inquire into the cause of the variation in the colour of the Greenland Sea. He says :*—

“ The colour of the Greenland Sea varies from ultramarine blue to olive green, and from the most pure transparency to striking opacity. These appearances are not transitory, but permanent ; not depending on the state of the weather, but on the quality of the water.

“ The food of the whale occurs chiefly in the green coloured water ; it, therefore, affords whales in greater numbers than any other quality of the sea, and is constantly sought after by the fishers. Besides, whales are more easily taken in it than in blue water, on account of its great obscurity preventing the whales from seeing distinctly the approach of their enemies.

“ Nothing particular being observed in this kind of water sufficient to give it the remarkable colour it assumes, I at first imagined that this appearance was derived from the nature of the bottom of the sea. But on observing that the water was very imperfectly trans-

* MS. Autobiography. See also “ Arctic Regions,” i. 175, *et. seq.*

parent, insomuch that *tongues* of ice, two or three fathoms under water, could scarcely be discerned, and were sometimes invisible, and that the ice floating in the olive-green sea was often marked about the edges with an orange yellow stain, I was convinced that it must be occasioned by some yellow substance, held in suspension by the water, capable of discolouring the ice, and of so combining with the natural blue of the sea as to produce the peculiar tinge observed.

“For the purpose of ascertaining the nature of the colouring substance, and submitting it to a future analysis, I procured a quantity of snow from a piece of ice that had been washed by the sea, and was greatly discoloured by the deposition of some peculiar substance upon it. A little of this snow, dissolved in a wine-glass, appeared perfectly nebulous—the water being found to contain a great number of semi-transparent spherical substances, with others resembling small portions of fine hair. On examining these substances with a compound microscope, I was enabled to make the following observations,—

“The semi-transparent globules appeared to consist of an animal of the medusa kind. It was from one-twentieth to one-thirtieth of an inch in diameter. Its surface was marked with twelve distinct patches, or *nebulae*, of dots of a brownish colour; these dots were disposed in pairs, four pairs, or sixteen pairs alternately, composing one of the nebula. The body of the medusa was transparent. When the water containing these animals was heated, it emitted a very strong odour, in some respects resembling

the smell of oysters when thrown on hot coals, but much more offensive. The fibrous, or hair-like substances, were more easily examined, being of a darker colour. They varied in length from a point to one-tenth of an inch; and when highly magnified, were found to be beautifully moniliform. In the longest specimens the number of bead-like articulations was about thirty; hence their diameter appeared to be about the one-three-hundredth part of an inch. Some of these substances seemed to vary their appearance; but whether they were living animals, and possessed of locomotion, I could not ascertain. From one of the larger specimens I observed some fine collateral fibres. They possessed the property of decomposing light; and, in some cases, showed all the colours of the spectrum very distinctly. The size of the articulations seemed equal in all, the difference in length being occasioned by a difference in the number of articulations. The whole substance had an appearance very similar to the horns or antennæ of shrimps, fragments of which they might possibly be, as the squillæ are very abundant in the Greenland Sea.

“I afterwards examined the different qualities of seawater, and found these substances very abundant in that of an olive-green colour; and also occurring, but in lesser quantity, in the bluish-green water. The number of medusæ in the olive-green sea was found to be immense. They were about one-fourth of an inch asunder. In this proportion, a cubic inch of water must contain 64; a cubic foot, 110,592; a cubic fathom, 23,887,872; and a cubical mile, about 23,888,000,000,000,000!

From soundings made in the situation where these animals were found, it is probable the sea is upwards of a mile in depth ; but whether these substances occupy the whole depth is uncertain. Provided, however, the depth to which they extend be but two hundred and fifty fathoms, the above immense number of one species may occur in a space of two miles square. It may give a better conception of the amount of medusæ in this extent, if we calculate the length of time that would be requisite, with a certain number of persons, for counting this number. Allowing that one person could count a million in seven days, which is barely possible, it would have required that eighty thousand persons should have started at the creation of the world to complete the enumeration at the present time !

“ What a stupendous idea this fact gives of the immensity of creation, and of the bounty of divine Providence, in furnishing such a profusion of life in a region so remote from the habitations of men ! But if the number of animals in a space of two miles square be so great, what must be the amount requisite for the discolouration of the sea, through an extent of perhaps twenty or thirty thousand square miles ?

“ These animals are not without their evident economy, as on their existence, possibly, depends the being of the whole race of mysticete, and some other species of cetaceous animals. For the minute medusæ apparently afford nourishment to the sepia, actinæ, cancri, helices, and other genera of mollusca and aptera, so abundant in the Greenland Sea, while these latter constitute the food

of several of the whale tribe inhabiting the same region ; thus producing a dependent chain of animal life, one particular link of which being destroyed, the whole must necessarily perish."

Writing in his journal of a voyage to Greenland in 1820, he says of these creatures :—

"The larger proportion of these, consisting of a transparent substance of a lemon-yellow colour, and globular form, appeared to possess very little power of motion ; but a part, amounting to perhaps a fifth of the whole, were in continual action. Some of these being seen advancing by a slightly waving motion, at the rate of a hundred and eightieth of an inch in a second ; and others spinning round with considerable celerity, gave great interest and liveliness to the examination. But the progressive motion of the most active, however distinct and rapid it might appear under a high magnifying power, was, in reality, extremely slow ; for it did not exceed an inch in three minutes. At this rate they would require a hundred and fifty one days to travel a nautical mile. The condor, it is generally believed, could fly round the globe at the equator, assisted by a favourable gale, in about a week ; these animalcules, in still water, could not accomplish the same distance in less than eight thousand nine hundred and thirty-five years.

"Few circumstances among the minuter works of creation have struck me with so much surprise, as the appearance of these animalcules, occurring in such

myriads in a sea perpetually covered with ice,—exposed to an average temperature fifteen degrees below the freezing point,—and subject to be frozen, on some occasions at least, during every month of the year.

“The vastness of their numbers, and their exceeding minuteness, are circumstances, discovered in the examination of these animalcules, of uncommon interest. In a drop of water examined by a power of 28·224 (magnified superficies), there were fifty in number, on an average, in each square of the micrometer glass, of an eight hundred and fortieth of an inch; and as the drop occupied a circle on a plate of glass containing five hundred and twenty nine of these squares, there must have been in this single drop of water, taken out of the yellowish-green sea, in a place by no means the most discoloured, about twenty-six thousand four hundred and fifty animalcules. Hence, reckoning sixty drops to a dram, there would be a number in a gallon of water, exceeding, by one-half, the amount of the population of the whole globe! It gives a powerful conception of the minuteness and wonders of creation, when we think of more than twenty-six thousand animals living, obtaining subsistence, and moving perfectly at their ease, without annoyance to one another, in a single drop of water.

“The diameter of the largest of these animalcules, was only the two thousandth of an inch, and many only the four thousandth. The army which Buonaparte led into Russia in 1812, estimated at five hundred thousand men, would have extended, in a double row, or two

men abreast, with two feet three inches space for each couple of men, a distance of one hundred and six and a half English miles; the same number of these animalcules arranged in a similar way in two rows, but touching one another, would only reach five feet two and a half inches. A whale requires a sea, an ocean to sport in; about a hundred and fifty millions of these animalcules would have abundant room in a tumbler of water."

With regard to his seekings after spiritual things, Mr. Scoresby remarks : *—

"My religious services during this voyage, as may be presumed, were more devotional and more frequent than on former occasions. But I was not apprised of any particular instance of good being done amongst the crew. To my grief my friend, Dr. Holloway, had left Whitby on the day of my arrival, for Liverpool, where he purposed to reside. This was to me a circumstance of real regret and sorrow. I had no hope of ever seeing him, excepting on an occasional visit, any more; yet, as will hereafter appear, I was led by following, I trust, the indications of Providence, soon to take up my permanent residence at the very place to which he had removed."

This change occurred in November,—Mr. Scoresby having entered into an engagement with Messrs. Hurry and Gibson, of Liverpool, for the purchase of a vessel, of

* MS. Autobiography.

which he was to have the command, together with a one-third share in the entire speculation. On the 5th of November 1818, previous to their removal to Liverpool, Mr. Scoresby's second son—FREDERICK RICHARD HOLLOWAY—was born.

CHAPTER VIII.

COMMENCES HIS WORK ON THE ARCTIC REGIONS—REMOVAL TO EDINBURGH—LETTERS TO HIS SISTER—ROYAL SOCIETY OF EDINBURGH—DEATH OF HIS MOTHER—REMOVAL TO LIVERPOOL—"BAFFIN"—CURIOUS ATMOSPHERIC PHENOMENA—SABBATHS IN THE ARCTIC REGIONS—PUBLICATION OF "ARCTIC REGIONS"—REVIEWS.

1819-1820.

THE excitement caused by the recent Arctic expeditions having rendered the public clamorous for authentic information respecting this ungenial clime, Mr. Scoresby was strongly urged by his friends to collect the results of his experience, and give to the world a work which, from his renown as an Arctic navigator, could not fail to be highly appreciated. He had from time to time been collecting materials for such a work, and had made some progress in its construction, but seemed to entertain a dread of publishing; his peculiarly sensitive disposition prompting him to shrink from the criticism to which, when fairly launched, the first-fruits of his protracted labours would be subjected.

Having determined to remain at home during the fishing season of 1819, however, in order to superintend the building of the vessel, the purchase of which he had arranged with Messrs. Hurry and Gibson, he thought it a good opportunity for completing his work, and, with this view, proceeded to Edinburgh to consult with the

publishers. He left for Edinburgh in December, where (at his lodgings in 17 Hanover Street), he was shortly after joined by Mrs. Scoresby and family. Messrs. Constable having offered £250 for an edition of one thousand copies, Mr. Scoresby accepted their terms, and applied himself earnestly to his task, hoping to accomplish the greater portion of it before his services would be required in Liverpool.

Convinced of the vast importance of religion, and having at the outset of his own religious career experienced the inestimable blessing of communion with a truly Christian and sympathizing heart—such as he met with in his friend, Dr. Holloway—he at all times evinced the most lively interest in, and tendered his warmest sympathy to those in whom he found the least desire to walk no longer after the flesh but after the spirit. This is remarkable in the following extract from a letter written at Edinburgh, on the 9th of December, to his eldest sister :—

“It is with much pleasure, my dear sister, that I have observed in you an increasing desire after the things which are of more importance than earthly treasures and worldly enjoyments. If my observation is correct, you will be pleased that I enter upon a subject of which you feel the value. It strikes me that you have come within sight, as it were, of the kingdom of heaven. If so, follow on, looking unto Jesus, until you have the full assurance of being interested in his salvation. The most dangerous state, I conceive, a person can be in, is when they fancy they are very good, and have a good heart, have done

nobody any harm, have done many good, charitable acts, and therefore shall receive mercy at the hand of God. Persons in this state of mind, so long as they continue in it, must be *without hope*. The fact can be clearly made out. Christ did not die for them, because he expressly says, 'I came not to call the righteous' (that is, such as esteem themselves so), 'but sinners to repentance.' 'The whole' (that is, such as fancy themselves morally and spiritually sound and healthy) 'need not a physician, but they that are sick,' (or, they who feel themselves spiritually diseased—they who find that their hearts, understandings, wills, affections, and every power of the mind, are alienated from God, and unsound). Now, the new birth or regeneration of which Christ urges the necessity, does not consist in a person discovering the spiritual diseases only, though this must be a step towards it, but in finding through the Holy Ghost the Spirit of Christ, that they are delivered from the slavery or bondage of those corruptions. Imperfections will continue through life, but these imperfections do not prevail. A person in a state of nature seldom or never resists sin, unless it be some scandalous transgression, and there be a danger of bad consequences arising from its indulgence; he indulges in all or most of the foolish and sinful pleasures of the age for which he has naturally a desire, and quenches any good or holy feelings which, from preaching or reading, may be excited in his mind. But the regenerate person is the reverse; he indulges voluntarily in no sin, and though he commit sin in thought, or word, or deed, it is against his will, and he mourns every instance

of imperfection and transgression ; if evil thoughts arise in his mind (and he must still be subject to this formidable battery of the devil), he, instead of indulging and fostering them, strives against them by the sword of the Spirit, which is the word of God ; he offers up mental, if not verbal, prayers to God for assistance, and in him finds the only effectual help. Every person has a desire for salvation, but few are willing to give up all they have and are unto God. All persons have some darling sin, or constitutional sin, which is discovered best by being the last they would resign, or being the one they would most strenuously advocate and excuse. With some it is an insatiable desire after wealth, with others intemperance, pleasure so called, lust, ambition, and so on.

“Now, there are many pleasures in themselves lawful, but when they cannot be resigned it is a proof they are unlawful. A true Christian will always strive to conform his will to that of God. He seeks by prayer direction in all his affairs, and submits himself, by what appears to be a train of providences, to the will of God. The great hindrance to a person setting seriously about seeking after salvation (I mean after they begin to find they are not right in the sight of God), is usually their constitutional sin. They could give up everything but that ; they could give alms, clothe the naked, labour for other people’s good, even do penance and go on painful pilgrimages rather than give up that one darling sin. Now, here they err ; they want to get the better of this sin before they go to Christ, and think it necessary to overcome their evil hearts themselves, which is impossible.

If they are in earnest they will pray to God to change their hearts and subdue their darling propensities. The beauty of Christianity or true religion is, that it removes the ruling influence of every constitutional vice. A Christian resists, in a great degree, every sinful inclination, because he finds *the desire taken away*. Thus, if pleasure, so called, were his darling sin, he finds it lose its relish, and discovers more true satisfaction in doing the will of God than in any enjoyment of sense. But he enjoys infinitely more than any sensual person can, because his enjoyments are without regret, but worldly pleasures are always followed by gloom and despondence.

“After all I have said, we must ever recollect that God is the author of every good and perfect gift, and hence it is impossible for us to do anything toward saving ourselves. But, though we can do nothing to our justification, yet there are means to be used on which God himself has promised his blessing: these are prayer, meditation, strict and conscientious observance of the Sabbath, reading the Bible, which, if performed with a dependence on what Christ has done, and with a sincere desire to come unto God, and a fervent desire and view of the necessity of the influence of the Holy Spirit to assist our endeavours, will seldom, if ever, fail of being followed by the blessing God has promised to them that ‘*hunger and thirst after righteousness* ;’ namely, that ‘*they shall be filled*.’ If what I have written corresponds with your ideas, if I mistake not that your sincere desire is to be set right and put into the way to heaven, I shall be glad to correspond with you on this subject. I can assure you it is

my frequent prayer that you may be established in the fear of God and in the way of salvation. What I have written is the effect of experience. I have been much indebted for the reading of God's providences to my esteemed friend, Dr. H.; he first led me to discover that every occurrence of life had some particular design, and that all things work together for good to them that fear God. I can truly say that I have found the ways of religion are ways of pleasantness, and all her paths are peace. I was never half so happy before I came to this knowledge, and never enjoyed so much of life. Pleasures or enjoyments which are sinful have no temptation for me, but I have yet many rational enjoyments and pleasures,—domestic pleasures, social pleasures, the pleasures afforded by intercourse with great and good men, and, above all, the pleasure derived from a sense of the favour of God, and from a sweet experience of the love of God in the heart, which, indeed, passeth all understanding. I used to fancy that I must give up all enjoyments if I became religious, but now I find that things I used to call pleasures would now disgust me, whilst a multitude of new enjoyments have burst upon me."

Writing again to the same sister on the 21st of December, he continues:—

"If you have come to the decision, which I sincerely hope you have, that whatever others do, you will serve the Lord, I, perhaps, though myself but a babe in these things, yet, from an experience of the truth of religion in

my heart, may be able to afford you a little help. Write boldly; don't study the style and composition, nor hide your feelings; let your letters be filled with the genuine, unvarnished feelings of your heart. Don't be ashamed of it, if you should discover that your heart, which you, no doubt, at one time thought a good one, should now prove itself to have been deceitful above all things and desperately wicked. If you should discover this fact, take it to yourself for a consolation that the disease is known, then shall you soon learn where to find a cure. Where there is a genuine faith, which, by-the-by, is a growing principle, Christ is gradually made to the believer wisdom, righteousness, sanctification, and everlasting redemption; and it is the teachings of his Spirit alone which can make clear and reveal the mysteries of godliness. If you are ignorant, God will, by earnest prayer, give for Christ's sake his Holy Spirit, who shall teach you, and become unto you wisdom. In the same way, if you feel yourself unholy and impure, Christ will be your sanctification.

“The best human means known is, perhaps, the perusal of the Bible with much secret prayer. A Christian could as well live without food as without prayer. What food is to the body, private devotion is to the soul. But prayer is not meritorious in itself, neither could we, by *praying always* secure our salvation; but it is a means which God hath appointed, and which God is in the habit of blessing in a very peculiar manner. By prayer, we, through the influence of the Spirit of God, prepare our hearts for the reception of spiritual blessings. And with

regard to temporal matters, it is always a good sign when we are first induced to seek the direction of God in them; but it is always needful to endeavour by prayer to obtain that state of resignation to God's will, that we may be prepared for a disappointment of any of our most anxious expectations, and under every disappointment be prepared to say, 'Thy will be done.' Often, however, it will be found, especially in the early days of Christian experience, that a great rebellion of heart exists. Here earnest and frequent prayer, a view of the influence and the promises of God through Christ, and the use of the experience of others, will show us that it is most profitable to submit unconditionally to the will of God, who in the end will make all things operate according to his pleasure."

On the 25th of January 1819, Mr. Scoresby was elected a fellow of the Royal Society of Edinburgh, his many valuable contributions to different learned societies and philosophical journals having already earned for him a high reputation in the scientific world; and, indeed, at this time, though arduously engaged with his work on the northern regions, he did not fail to contribute several very interesting scientific papers, of which, one "On the best means of overcoming obstacles to discoveries in the Arctic Regions," was published in the memoirs of the Wernerian Society; a second, "On a method of determining the height of cliffs and mountains by measuring the depression of the horizon," was contributed to the *Edinburgh Philosophical Journal*; and a third, "On

the anomaly in the variation of the magnetic needle, as observed on ship-board," was communicated through Sir Joseph Banks, to the Royal Society of London on the 4th of February.

Whilst thus busily engaged in imparting to his fellow-labourers in science that knowledge which he, under a gracious Providence, had been permitted to acquire, conscious that "the excellency of knowledge is, that wisdom giveth life to them that have it," he was at the same time seeking to prepare himself for a trial which he felt would require a large exercise of faith to enable him to bear with Christian resignation. His mother, to whom he had ever been fondly attached, had for many weeks been afflicted with a severe illness, which had so undermined her constitution that her medical advisers could entertain no hope of her recovery. The first of February, which to her was a day of unspeakable *gain*, was to her bereaved family one of inestimable loss. In reply to the letter communicating the sad tidings of her death, Mr. Scoresby thus writes to his sorrowing friends:—

"The dreaded intelligence has at length arrived. Our dear, affectionate, our beloved mother is no more. How pleasingly painful is the recollection of her tender care! When we were in pain the only sympathising friend was our mother,—when we were in grief, the consolatory friend was our mother—when we were the subjects of pleasure, the participating friend was our mother,—yea, there was a time when the only dear object of our affections was our mother.

“We were in some measure prepared for the distressing news, nevertheless, we feared the event and dreaded the post hour every day during the interval since she was taken alarmingly ill. But all these events are in the hands of God. It is our duty, under the painful dispensation, humbly to submit to the will of God, and to pray for his sanctifying grace that these events may be rendered profitable to us. There is no knowledge or study on earth so important as that of spirituality of mind. Were we to cultivate most diligently this grace, we should be prepared for submitting to the will of God, for as sure as he sent affliction so surely would he give us consolation. Not all persons who pass for religious among the people of the world can believe that the trying dispensations which occur on the earth are right and good. Though Pope, in his beautiful essay on Man, after falling into such a gross device as to trace all integrity of character into self-love instead of Christianity, even he concludes that—

In erring reason's spite
One truth is clear ; whatever is, is right !

Those who know anything about experimental religion will soon discover the truth of this in their own lives. They will find that afflictions, losses, disappointments, mortifications, and every other painful thing, are designed for some good purpose, and will generally be able to discover what particular object it is designed to promote. If there be any sin indulged, something will occur which will reveal it, and trouble after trouble will be laid on them until it is relinquished. I speak here of the people

of God. Now, if in the common affairs of life we can discover the designs of the Almighty, and can perceive that their end and aim are just and good, certainly, we may, with propriety, conclude that those things which we cannot comprehend are just and good also. Scripture proclaims this truth, and in this way reason itself confirms it. It is a pleasing consideration, to those who fear God, that afflictions and trials, which, to unbelievers and despisers of God, are intended as chastisements and punishments, to the children of God are intended for improving the heart. Thus, evils or trials are sent on the wicked in *anger*, but on the people of God in *love*."

By this distressing circumstance Mr. Scoresby was called away from Edinburgh sooner than he had anticipated, but he did not return. In the beginning of May he removed with his family to Liverpool, where he continued to reside during the remainder of the year 1819, with the exception of a few weeks in which he made an excursion into Ireland and the Isle of Man. His time was almost wholly occupied in superintending the building of the *Baffin*. Upon this vessel every care was bestowed, and no expense was spared which could enhance her efficiency in the service for which she was designed, so that when completed she was esteemed one of the finest that could be constructed, and represented a property of about £9500.

His leisure was spent in revising his work on the Arctic Regions, and in associating with a select circle of friends, more especially with Dr. Traill, of whom he

says, "he is a very superior lecturer and a most valuable friend."

The *Baffin*—so named "in honour of our long neglected navigator, of whose hardihood, skill, and perseverance in crossing the Atlantic, and navigating and discovering the circuit of Baffin Bay, in a vessel of only fifty-five tons burthen, cannot be too highly estimated"—the *Baffin* was the first vessel of her kind built in Liverpool, and her launch, on the 15th of February 1820, was attended with a good deal of excitement. She put to sea on the 18th of March and returned on the 23d of August, with a larger cargo than had ever been imported from Greenland into Liverpool. Few circumstances of interest occurred during this voyage; the polar ice remained much in the same state as it had been during the three previous years; a chain of open ice had intruded between the main western body and the west coast of Spitzbergen, whilst the western body itself was found to be somewhat more open, so as to permit of a passage to within fifty or sixty miles of the east coast of Greenland, below the parallel of 76° , from which Mr. Scoresby conceived the idea of effecting a landing, but as he did not approach the coast until late in the season, he was obliged to make his way out of the ice, contented with the hope of a future opportunity.

During this voyage Mr. Scoresby made several sketches of singular appearances presented by the coast line, and also by fleets of ships, and masses of ice, under circumstances of remarkable atmospheric reflections and refractions. Two of these curious phenomema, which

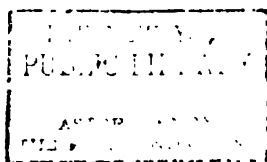
presented themselves on the 13th of June, and 1st of July, respectively, may be mentioned. The first of these represents the *ice-blink*—a peculiar appearance of brightness in the sky, beneath which navigators infer the presence of ice.

To his sketch Mr. Scoresby appends the following description :—

“This appearance of the ICE-BLINK occurred on the 13th of June 1820, in latitude 76° north. The sky aloft was covered with dense, uniform hazy cloud, which indeed occupied the whole of the heavens, excepting a portion near the horizon, where it seemed to be repelled. The upper white blink refers to ice about six miles distant, being beyond the horizon ; the narrow, yellowish portions refer to floes and compact ice ; the lowest yellow blink, which in brightness and colour resembled the moon, was the reflection of a field, at the distance of thirty miles, to which, directed by the blink, we made way in the *Baffin*, through the channels of water represented in the sky by bluish grey streaks. The FIELD we found to be a sheet of ice 150 miles in circumference !”

The second represents an appearance commonly met with in Arctic regions whenever the rays of the sun impinge on a dense fog. At such times, an individual at a considerable elevation from the sea (in the accompanying drawing, the figure in the centre is that of Mr. Scoresby in the crow's nest, at a distance of 90 to 100





feet above the sea) will frequently observe an image traced in the fog before him, comprising a series of prismatic circles, or *coronæ*, varying in brilliancy, and having in the centre one more lustrous than the rest, forming a halo, or *anthelion*, round the shadow of his own head. Mr. Scoresby had frequent opportunities of witnessing these beautiful phenomena, and has entered largely into the question of their origin in his "Voyage to Greenland." On the back of the original sketch is the following description :—

"Remarks on the preceding sketch.—During the month of July 1820, the weather being often foggy, with a bright sun sometimes shining at the height of the day, some extraordinary coronæ were observed from the mast-head. These occurred opposite to the sun, the centre of all the circles being in a line drawn from the sun through the eye of the observer. On one occasion [represented in the sketch] four coloured luminous circles were observed. The exterior one might be 20° in diameter; it exhibited all the colours of the spectrum. The next, a little within it, was of a whitish grey colour; the third was only 4° or 5° in diameter, and though it exhibited the colours of the spectrum, these colours were not very brilliant; the fourth was extremely beautiful and brilliant; the interior colour was yellow, then orange, red, violet, &c. The colours of the whole three coronæ were, I think, in the same order; but of this I am not very certain. Indeed, on reflection, I suspect that the second circle must have been in the reverse order of

the first; the first and fourth being the same: the third was not coloured. In the midst of these beautiful coronæ I observed my own shadow—the head surrounded by a glory. All the coronæ were evidently produced by the fog; my shadow was impressed on the surface of the sea.” *

The religious services on board the *Baffin* during this voyage were most important, and forcibly illustrate those Sabbatarian principles which Mr. Scoresby was throughout his life desirous of inculcating upon the minds of his associates; urging them to turn away from doing their pleasure on God's holy day. In a work† published

* “As the fourth and fifth circles seem to correspond, in appearance and diameter, with the primary and secondary rainbows, it is reasonable to look for an explanation of the phenomena in the same cause, namely, the reflection of the rays of the sun, decomposed by different refractions in minute globules of water, of which the mist, wherein the coronæ occur, in a great measure appears to consist. The anthelion, in the centre, may possibly be occasioned by the reflection of the sun's direct rays, falling on the central parts of the globules of vapour. Each globule will thus reflect two specks of light,—one from the nearest, and another from the most remote surface; consequently, the combined reflections may be abundantly sufficient for the production of a glory in the centre of the coronæ; and, as the figure of the observer is in a straight line between the sun and the centre of the whole of the circles, the shadow of his head is necessarily encompassed by this glory. As the glory is often beautifully coloured externally, may not the rays of light falling near the axis of the globules, immediately around the centre of the circles, undergo a slight refraction from the circumstance of being out of the centre, and thus exhibit the prismatic colours? But, admitting the explanations now offered to be agreeable to the law of dioptrics, it will not, I believe, be possible to account for the formation of the second and third coronæ, by any probable combination of reflections and refractions by globular particles. Hence, it is not improbable that the snowy spicula observed [floating in the atmosphere] in both the instances here recorded, may have had a share in the production of the phenomena.”—*Journal of a Voyage to Greenland* in 1822, p. 281.

† “Sabbaths in the Arctic Regions.” By the Rev. W. Scoresby, D.D., F.R.S.S.L. and E. London: Longmans and Co., 1860.

many years afterwards, he gives the following account of their Sabbath observance :—

“ Though, for several of the latter voyages which I undertook to the Arctic Seas, it had been our general rule and endeavour to refrain from fishing on the Sabbath, it was not until the year 1820, that I was enabled, *undeviatingly*, to carry the principle into effect. But in the voyage of that year, the principle of the sanctity of the Sabbath was not violated, as far as I am aware, by any endeavour whatever to pursue the fishery on that sacred day. Several of the harpooneers—whose interest in the success of the voyage was such, that even a single large whale, being captured, yielded to them an advantage of from £6 to £8 each—were, in the early part of the voyage very much dissatisfied with the rule. They considered it a great hardship that, whilst other ships took advantage of the seven days of the week, for the furtherance of their fishing, they should be restricted to six. And, as the obtaining of a full cargo was then the lot only of a very few, they reasoned, ‘ that our chance of a prosperous voyage was but as six to seven, when compared with that of our competitors in the fishery.’ The chief officer, however, who, in the outset, felt the restriction very strongly, was frequently known to remark, ‘ that if we, under such disadvantages, should make a successful voyage, he should then believe there indeed was something like a blessing on the observance of the Sabbath.’

“ The early and middle part of the fishery, in the

voyage referred to, having proved very unproductive, our principles, towards the conclusion of the season, were put to a severe test, when, for three successive Sundays, a considerable number of fine whales most invitingly appeared around us. But, notwithstanding the great temptation to 'hungry fishermen,' we were enabled to persevere in our system of forbearance, and with such a result, that all on board, I believe, considered it as providential.

"On the first occasion, indeed, which happened during the night, a boat—in neglect or forgetfulness of the general order—had been sent off in pursuit; but it was immediately recalled, when I arose, in regard to the Lord's day, and no other boat was afterwards permitted to be lowered, though an unusual number of fish, from time to time, were in view. The three or four following days were very unfavourable for our object, being foggy, and, for the most part, calm; but on the Wednesday, whilst the fog was yet exceedingly dense, a fine fish was struck in a crowded 'patch of ice,' and though its pursuers could have no other guidance in the chase but their mutual shouts, and the sound of the 'blowing' of the distressed animal, yet the result, notwithstanding the difficulties in the way, was unexpectedly successful, and the prize secured.

"The next Lord's day, though fish were astir, was a day of sanctified and happy repose. Early in the week, on the appearance of several whales, our efforts, put forth with augmented power, no doubt, in consequence of the restraints of the Sabbath, and furthered, I firmly believe, by Him who hath promised his blessing to them

who 'call the Sabbath a delight, the holy of the Lord, honourable,' were, under various anxious hazards, highly successful. Two large whales were taken on the Tuesday, and another on the Friday, yielding together, a produce of the value of about £1600.

"A day of sweet and welcome repose was the succeeding Sabbath. The gale had for some time subsided ; and now a genial and cloudless atmosphere cheered the spirits, whilst all nature, sparkling under the sun's bright beams, seemed to participate in the gladness. Several whales sported around us ; but, as far as we were concerned, they were allowed a Sabbath day's privilege to sport unmolested. The men were now accustomed to look for a blessing on Sabbath observances."

By men of science, Mr. Scoresby's work on the *Arctic Regions*, which was published during his absence in 1820, was received, as his friend Captain Basil Hall remarked, with "*thirsty* interest." Nor, at a time when so vast an amount of British property was being annually risked in the dangerous enterprise of the whale fishery, could it fail to excite even a greater degree of interest in the commercial world, not only as conducive to the success of private speculation, but also to a common national benefit. As such, the reviews of the work were well calculated to relieve the most anxious and sensitive mind ; and not only was Mr. Scoresby richly rewarded by the approbation of his own countrymen, but likewise by the most friendly assurances of high esteem on the part of various learned societies on the Continent. Monsieur le Baron

Portal, *Ministre de la Marine et des Colonies*, having, by order of the French Government, instructed M. le Comte de Rosily and M. le Chevalier de Rossel to examine the work, and to render their opinion as to the probable utility of a French edition, a report containing a general argument of the book was transmitted to his Excellency, from which may be quoted the following passing remarks :*—

“ In consequence of the letter in which your excellency requested M. le Comte de Rosily, director of the dépôt of maritime maps and charts, to report on the various subjects treated of in the “ History and Description of the Arctic Regions and of the Whale Fishery,” by Captain Scoresby, we have examined the work, and can assure your excellency that for a lengthened period we have not read a more substantial and methodical nautical work. The details into which we are about to enter, will enable your excellency to judge of what importance it might be to make it known amongst the sailors destined to navigate the Northern Seas, and to those merchants who may be induced to direct their speculation to the object of the whale fishery. Both the one and the other will there find all that one of enlightened experience could possibly teach with regard to the dangerous navigation of seas embarrassed by ice, as well as of the advantages which may be derived and the risks which will be incurred in the prosecution of this fishery.

* Translated from “ *Annales Maritimes et Coloniales* ;” No. 7 : Année 1820, Juillet, pp. 700-712.

“ The work consists of two volumes octavo, of more than five hundred pages ; the first containing a most complete geographical and hydrographical description of the countries and seas which surround the North Pole ; the second being exclusively devoted to the whale fishery and its products.

“ In the outset the author examines the possibility of a sea passage between the Atlantic and Pacific Oceans, as well by way of the north-east as by the north-west, following this with a precise history of all the attempts which have been made up to the present time for finding it. Of the existence or non-existence of this passage it would be imprudent in us to venture an opinion, seeing that the author himself does not determine anything in this respect : he is satisfied with one very just remark, the truth of which is proved by the results of those expeditions which have been sent out in search of it—namely, that if such a passage exists, not only those who discover it, but likewise such as would avail themselves of it in future, would require to winter among the ice. These arguments are based on very solid reasonings, and are strengthened by the particular manner in which the statements, relative to the navigation, are rendered. The peculiar characteristic of this work is that conclusions are never in a single instance adduced, without the support of experience—whether in matters of the commonest occurrence, or in the most delicate manipulations of physical science. General principles are only discussed where the result of the discussion can be supported by facts to which the author himself

has been witness, or where he has received the testimony from respectable and creditable men. Wherever he treats of science, the names of the most popular and celebrated Englishmen are cited. The remarks which we have had occasion to make with respect to this part of the work, are, without restriction, equally applicable to the rest. . . .

“In general, his procedure is an example of what may be accomplished by a reflective mind aided by sound education, and this it would be most important to inculcate on our sailors. Captain Scoresby appears to me to have united to a mind incomparably more enlightened that genius for observation which rendered the accounts of Dampier so interesting and instructive. . . .

“The translation and publication which is suggested does not appear to be of a nature to become the object of speculation; no person in France is employed in the whale fishery; and, therefore, this work would only be sought after by a small number of the inquisitive, who would not obtain from it any material advantage, while it would fix but in a small degree the attention of those who could profit by it. But, if it be the purpose of the Government to enter effectively into the whale fishery—which has been so long abandoned that we may suppose the ancient traditions lost—the first step to be taken is the publishing of Captain Scoresby’s work; wherein those who wish to speculate in the fishery may find all the practices necessary to it, perfected by the experience

of the people who make the greatest trade in its produce. Shipowners will here find all the information necessary for the construction and equipment of their vessels, and of the probable expenses of the enterprise ; whilst the captains employed in the direction of the fishery will find all the rules of practice requisite for insuring success.

(Signed) " ROSILY AND ROSSEL.

" PARIS, *May* 31, 1820."

CHAPTER IX.

VOYAGE OF 1821—CAPTAIN MANBY—PRAYER AT THE COMMENCEMENT OF A GREENLAND VOYAGE—FAILURE OF CAPTAIN MANBY'S SCHEME—CAUSE—DIRECTIONS TO HARPOONEERS—RELIGIOUS SERVICES ON BOARD THE *BAFFIN*—MAGNETIC RESEARCHES—MEMORIAL TO THE BOARD OF TRADE—RESULTS—SIR HUMPHREY DAVY.

1831-1832.

A TOUR of several weeks in Wales, together with the preparation of a paper on the *Magnetimeter* for the Royal Society of Edinburgh, occupied Mr. Scoresby until the time for preparing the vessel for another voyage to the Polar regions. In this voyage (1821), he was accompanied by Captain Manby* of Yarmouth, whose unremitting labours in the invention of means for the preservation of shipwrecked sailors are well known, though the results of his unwearied exertions can only be properly appreciated by those who have, from time to time, opportunities of witnessing their happy effects. The circumstances which gave rise to Captain Manby's voyage in the *Baffin* are explained in Mr. Scoresby's MS. journal as follows :—

“ *March 26th.*—In the evening, Captain Manby of

* G. W. Manby, born at Hilgay in Norfolk, 1765 ; educated at the Royal Military College at Woolwich ; entered the army, and was made barrack-master at Yarmouth in 1803, where he invented his mortar apparatus for saving lives in case of shipwreck. Died at Southtown, near Great Yarmouth in 1854.

Yarmouth arrived at my house, with the intention, agreeable to previous arrangement, of accompanying me on my voyage to the Polar Seas. His chief object in this adventure is to prove the utility of a harpoon gun and several harpoons on a new construction. Whatever may be the success of the experiment, Captain Manby deserves every praise from those interested in the whale fisheries, as well as from every friend to genius and improvement. His zeal and exertion in preparing and completing his apparatus have been unremitting; and, as far as I can judge of its efficiency, it promises to be a great acquisition to the whale-fisher. Some of his apparatus has the advantage of being applicable in cases and under circumstances in which the ordinary modes of capture are not effectual. His harpoon seems to have power to kill a fish, if shot in a vital part, without the use of the lance; and an explosive shell which he has prepared, provided it can be lodged in the cavity of the chest or abdomen, seems likely to produce instant paralysis, if not immediate death. If such be the effect, whales may be attacked by it, without loss, at the edge of packs or in bay ice, where in common practice they cannot be struck without the greatest risk of losing the lines, and still with a very small probability of capture. Another improvement of Captain Manby is the construction of a harpoon, which it is believed cannot be retracted if struck through the blubber of the whale. The barbs are jointed and compressible, so that the wound made in the whale is scarcely one-third the size of the head of the instrument when expanded. The joint is well

supported and ingeniously contrived; it is, indeed, the only jointed barb that I have seen, which possesses anything like sufficient strength. This property, Captain Manby has given both to the *gun* and *hand* harpoons.

“Captain Manby brought with him a letter of introduction from Dawson Turner, Esq., of Yarmouth, one of the ablest naturalists in that part of the country, or, I may say, in Britain. If anything else besides the introduction had been necessary to entitle Captain Manby to my assistance in his experiments, and to induce me to cultivate a friendship with him, it was amply made up in a very few hours’ intercourse. His general information, his correct judgment and gentlemanly manners, must always render him an agreeable and improving companion. This, together with the fact of his having, at an advanced period of life,* been induced to forego the enjoyments of a peaceful and happy home, to encounter the rigour and privations of a Greenland voyage, and this not with the object of personal emolument, but, with his usual philanthropy, for contributing to the success of a branch of trade the highest in the scale of national importance, and for diminishing, so far as may be, the dangers of the occupation, must ever entitle him to the best attentions of every lover of science.”

The *Baffin* weighed anchor on the 8th of April. An account of the voyage was subsequently published by Captain Manby, in which he has recorded the following prayer:—

* Anno ætatis 56.

“At eight o'clock the captain, as I found to be his usual custom in concluding the Sabbath, ordered all the boys and young men into his cabin to read alternately a verse in the Bible, for three or four chapters; after which we all fell upon our knees, and he offered up an extempore and most impressive prayer.”

“MR. SCORESBY'S PRAYER ON THE COMMENCEMENT OF A VOYAGE TO GREENLAND.

“Almighty God, the king immortal, invisible, eternal, who art the creator and preserver of mankind, in knowledge of whom standeth our eternal life, and whose service is perfect freedom; we would approach thy footstool with the voice of supplication and prayer, and with thanksgiving would make our requests known unto thee.

“Though we, from our numerous iniquities, are not worthy to come into thy divine presence, nor can be entitled to the least act of thy favour; though our best actions, in the view of infinite purity, must be unclean, and insufficient to answer unto thee for a single sin; yet we bless thee that, through the merits of our Saviour, we are encouraged to come humbly to thy throne, that we may obtain mercy and find grace to help us in every time of need. We esteem it our privilege as well as our duty to bow the knee before thee, and rejoice in the opportunity of seeking thy blessing on the adventurous voyage on which we are now embarked. Go out with us on the expanse of the ocean; be with us when these raging elements proclaim the power of divinity; and direct us, merciful God, with thy heavenly wisdom. Up-

hold us with thine almighty care ; further us with thy continual help ; prosper us with success and happiness ; restore us, in thine own good time, to those who, by the ties of kindred or the bonds of affection, are near and dear to us ; and finally, after this life, bring us and them to thine everlasting kingdom, through Jesus Christ our Lord. Thou, O God, hast hitherto manifested thyself unto us as a prayer-hearing and a prayer-answering God ; thou hast heard our petitions in the midst of danger, hast delivered us from numerous perils, and hast directed us and supported us in many difficulties. Thou hast been, and still art, a present help in every time of need. Grant us, we beseech thee, a continuance of thy favour ; preserve us, while we trace the treacherous deep, from every evil—from rocks and shoals ; from fire and tempest ; from sea and ice ; from distress and accident ; and from every danger, seen and unseen, known and unknown. Sanctify the dispensations of thy providence to us-ward, whether prosperous or adverse, agreeable or painful ; and evermore give us such reliance on thy faithfulness, and such dependence on the excellence of thy government, that we may fully commit our ways unto thee, for thou wilt sustain us. To this end, O heavenly Father, may we be endowed with the sacred influence of thy Holy Spirit ; may we read thy word with profit, and find it to be the power of God unto salvation ; may we be earnest and constant in prayer ; may we be delivered from sin, and not from its condemning influence alone, but also from its hardening and ruling power ; may we cultivate a spiritual frame of mind, by the diligent use of

every means of grace, and by avoiding whatever may grieve the Holy Spirit; and may we manfully resist the lusts of the flesh, that war against the soul, the lusts of the eye, the pride of life, and all other besetting sin. Then shall we experience the blessing of religion, and prove that her ways are ways of pleasantness, and that all her paths are peace.

“Bless now, O Lord, all for whom it is our duty to pray—our wives, our children, our parents, our kindred, our friends; may they have favour at the hands of the Lord, and be made partakers of the salvation of Jesus; though separated by an expanse of waters, we may yet meet in heart at the throne of grace. Preserve them, we beseech thee, in our absence; be unto them a husband, a father, a friend; and, if it please thee, in thine infinite mercy, to restore us to each other, may we again unite in adoration to thee for thy protecting goodness. Bless the sailors, our companions in this voyage of anxiety and peril; may they be obedient to the will of God, and, when they behold thy wonders in the deep, grant them grace to acknowledge thy sovereignty, thy mercy, and thy power.

“We thank thee, O Lord, for the mercies with which we are so richly surrounded. While thousands of our fellow-creatures are pining in misery and want, we are permitted bountifully to enjoy every necessary, and almost every luxury of life; and while many are given up to a hard and wicked heart, to work all mischief with greediness, and to sin against thee with a high hand, we praise thee that thou hast restrained us from gross

iniquity, and especially if thou hast given us the power of religion in our hearts.

“We now commend ourselves to thy fatherly care and protection. Keep us, we beseech thee, from evil, and lead us unto the knowledge of salvation through Jesus Christ. Pardon our manifold iniquities, and grant us a blessing according to thy promise, that where two or three are gathered together in thy name, there thou wilt be in the midst. Fulfil, O Lord, every desire and petition, as far as thou shalt see good for us, giving us, in this world, knowledge of thy truth, and, in the world to come, life everlasting. These, with all other mercies needful or good for us, as well for the body as the soul, we ask in the prevailing name of Jesus Christ; to whom, with the Father and the Holy Ghost, be endless praises. Amen.”

Although every facility was afforded by Mr. Scoresby for a complete trial of Captain Manby's ingenious apparatus—a harpooneer and boat's crew having been set apart for its especial service, yet, owing to the jealousy of the harpooneers, all their plans were frustrated. In the appendix to his journal, Captain Manby says—

“I was, indeed, assured in confidence by one of the crew, on whose veracity I could rely, that the following declaration had been made :—‘*That, if the gun succeeded, it might lead to its more general use, and that every man then who could point a gun could act as harpooneer;*’ and, further, that the minds of most of the crew had

been influenced to express a wish for its failure. After this, water was actually poured into one of my guns by some miscreant, no doubt with the object of defeating the success of the invention."

One other quotation may be made from Captain Manby's very interesting journal. It is the following:—

"Monday, May 7th.—It being usual for the officers to dine in the cabin, to drink a prosperous voyage, the mate and harpooneers were invited this day, and never did I see more justice done to roast beef and plum-pudding. The usual fishing toast, 'Ship strong, crew healthy, ice open, and fish plenty,' was drunk by all with great glee. Captain Scoresby, as is usual at this annual meeting, delivered to them his instructions, signals, and particular orders, to be observed when in pursuit of whales; and, as some of them relate to giving assistance to foreign adventurers, and partake so much of the national character, I have procured a copy of them. They will be found, I trust, not unworthy the imitation of other commanders of Greenland ships, and their diffusion may be eminently useful. Latitude this day, $75^{\circ} 20'$; thermometer, 27° .

"DIRECTIONS TO HARPOONEERS WITH REGARD TO
ASSISTANCE.

"First, Assist all ships whatever, either British or foreign, when it can be done without disadvantage to your own vessel.

"Second, If you accompany the boat of any ship in

chase of a fish, and they get fast, if none of their own boats be near, assist them, or bend on, if need be, and remain by them until you be no longer wanted. If you bend on, make no claim for assisting, as no reward will be taken.

“Third, Should you be sent to assist any vessel in killing a fish, do not chase it, on any account whatever, if it get loose, but return from the scene of action as soon as possible.

“Fourth, Do not attempt to strike a fish that has just escaped from any ship, provided its boats be in close pursuit; and it is only where a wounded fish is beyond the possible reach of the original striker that you can be justified in attacking her.

“Fifth, The above conduct I desire may be pursued with every ship, whether British or foreign, friendly or unfriendly. If the stranger be a friend, he is entitled to your assistance; if he be one who has withheld his helping hand under like circumstances, your aiding him will show him his duty in future.”

Mr. Scoresby closes his journal with the following retrospective remarks:—

“This voyage—although not very successful in its ostensible object—has, nevertheless, been most important in a religious view, the Almighty, in his infinite mercy and sovereign grace, having honoured my poor labours among the sailors, in a *pastoral* capacity, with the most pleasing and satisfactory evidences of usefulness. For

several years I have been in the habit of reading prayers and sermons weekly to the sailors under my charge, and latterly of having select devotional meetings on the Sabbath evenings; but never, until this voyage, did anything beneficial result that came to my knowledge. But on this occasion the power of divine grace has been irresistible and astonishing. Besides the usual means, of reading an abridgment of the Church of England liturgy in the morning and afternoon of every Sabbath-day, with one of Burder's, or Kidd's, or Young's sermons, I occasionally substituted for the latter an extempore address suited to the peculiar opinions, circumstances, or habits of the men about me; and in the evening of the day summoned the apprentices (with permission for others who chose to attend), and after hearing them read in the Bible and sing a hymn, I engaged in prayer, sometimes made some remarks on what had been read, and concluded with another hymn. Finding the seriousness and attention of the Sunday evening congregation gradually augmented and the numbers also increasing; observing also a decided change in the conduct of some of the crew (especially in one man who had been at the beginning of the voyage a dissatisfied and querulous character), I urged on some of the people, who were seriously disposed, the necessity of assembling among themselves for devotional exercises, for fanning the religious spark into a flame in those who were beginning to be enlightened, and for establishing themselves in religious strength and vigour. This request was carried into effect about the 13th of August. At first only a small number attended, and

these met with great opposition, derision, and persecution from their shipmates; but my authority and address to them having put an end to this annoyance, they met with increasing comfort and obtained a striking blessing. Twice the little church met in my cabin—the number of seriously disposed amounting to eleven. On inquiring into their Christian experience, it was delightful to see the tears of genuine and unaffected contrition streaming down the weather-beaten cheeks of a sailor who had entered on the voyage a careless, devotionless, and wicked character. There were, of the number who attended, *four* who gave the most hopeful evidences of having obtained a ‘new heart’ during the voyage. All of them, at the outset, were without concern for their souls; all of them were profane and gross swearers, and some of them far from being faithful servants to their employers. Now the whole of them, to use their own expression, ‘have knocked off swearing;’ all attend most diligently to the reading of religious tracts and the Bible; all are constant attendants at every meeting for worship; and all of them give pleasing and forcible evidences of genuine conversion to God. One of the four, I have anticipated, was at the first of the voyage a dissatisfied, quarrelsome, and impudent character. His conduct towards myself was extremely displeasing; but after being a month or two at sea I remarked an extraordinary change. He ceased to associate with the crew—became tractable, obedient, and obliging, and in fact distinguished himself as one of the most able and orderly sailors in the ship. In addition to these four, an equal number profess themselves to have

been greatly strengthened and established in religion, and two or three more appear to be under serious impressions. Thus, under the most discouraging circumstances, the humblest instruments, the grossest examples of profanity among their comrades, and various acts of hostility and persecution, have several souls been turned to God—have become followers and disciples of the Redeemer, and have been induced to praise him that ever they entered on the voyage in the *Baffin*."

Captain Manby, in a letter to Dawson Turner, Esq., gives the following sketch of Mr. Scoresby's character, as manifested during the late voyage:—

"Captain Scoresby appears to me to be one of the most extraordinary men that ever came under my attention, and, when I look at his age (being only 29), I may say the most extraordinary man of the age. I feel in his society as if I knew nothing; but I feel also that advantages and information may be derived from his experience and judgment not to be met with from any other source. To look at him with the eye of scrutiny, there is no particular clue to discover his great mind and vast scientific acquirements. The habits and conduct of his life possess uncommon evenness, and in the truest sense of the word he is a real good man, most religious, and extremely amiable."

As was his custom, during the interval between the voyages, Mr. Scoresby took *congé* for a fortnight in the

month of October, and on this occasion—accompanied by Mrs. Scoresby—visited the busy scenes of Manchester. But early in November we find him back again in Liverpool, sedulously investigating the arcana of science with the special object of endeavouring to throw a clearer light on the mysterious nature of galvanism and magnetism. In these investigations he operated conjointly with Dr. Traill, who, on the 17th of November, in a note to Mr. Scoresby, says,—“Could you let us make Tuesday a *long afternoon* of experiments—say from five o’clock? The cylinder is a good idea. In order to fix the principal facts I have made a little *memoria technica*, thus, PEAN expresses the *key* to the influence on the needle, being the initials in *positive electricity attracting north*, and PERS expresses that *positive electricity repels the south*.”

“Towards the end of the year 1821,” we read in Mr. Scoresby’s MS. journal, “my father and I made a representation to the Board of Trade, in a joint memorial, concerning the failure of the whale-fishery, and the reduction in the trade which would consequently take place, to the great deterioration of our national strength and resources; and on these observations founded a proposal for searching and exploring the hitherto unexamined coasts on the south and east of Spitzbergen, &c., with a view of discovering some more abundant fishing station, by which the loss of shipping might be lessened, and the returns augmented, to the great benefit of the whale-fishers, of our maritime population, and of the kingdom in general. This memorial was presented by Mr. John Barrow,

Secretary to the Admiralty, to the Right Honourable Frederick Robinson, the President of the Board of Trade, who thought so favourably of the proposal, that, in a note addressed to Mr. Barrow, and forwarded by the latter gentleman to my father, he requested we might be invited to London, and he should be glad to meet us at the Board of Trade, to see what could be done. The tenor of this note,* together with Mr. Barrow's comment† upon it, was such, that my father requested me immediately to proceed to London, and wait upon the President of the Board of Trade to offer our ships—the *Fame* and *Baffin*—for the proposed service. Being at the time, however, engaged in delivering a course of lectures on Magnetism at the Royal Institution, I was unable to comply with the request, but engaged to proceed to London immediately after the course was finished. Accordingly, on the evening of the 28th of January—having first received the advice and instructions of my partners and my father—I left Liverpool in the mail coach, and reached London on the evening of the following day. On the 30th I proceeded to the Board of Trade, and sent in my card. Mr.

"NORTON, 3d Jan. 1822.

* "MY DEAR BARROW,—I think this proposition well worthy of consideration, and I shall be very glad to see these gentlemen. I shall be in town the end of next week, and if you will take the trouble to invite them to London, and meet them at the Board of Trade, we will see what can be done.—Truly yours,

(Signed) "F. ROBINSON."

"ADMIRALTY, 5th Jan. 1822.

† "DEAR SIR,—Having sent your memorial to the Hon. Fred. Robinson, the President of the Board of Trade, I have received from him the enclosed; and you will perhaps think it advisable to let your son wait upon him.—Yours, my dear Sir, very faithfully,

(Signed) "JOHN BARROW.

Cap. Scoresby."

Robinson was not within, but the secretary would send me word when it would be convenient for me to see him. I waited two days, and then, receiving no intimation, I again called at the Office for Trade. There was a Cabinet at the time, and the president being one of the ministers, he was engaged at the Carlton Palace. The next day I called again, and again was unsuccessful. Finding nothing satisfactory, I then addressed a note to Mr. Robinson, requesting him to appoint a time for giving me an audience. At length I received a reply, and, at Mr. Robinson's request, arranged with Mr. Barrow to accompany me to the Office for Trade on the Wednesday following, the day after the king's procession to the House of Lords for the opening of Parliament. At the appointed time I called on Mr. Barrow at the Admiralty, who accompanied me to the Office for Trade, where we had an interview with Mr. Robinson. To my astonishment I found that, instead of speaking favourably of the proposal, as his correspondence implied, he now seemed altogether to waive any arrangement with me on the subject. He employed himself in endeavouring to show that our proposal was only suited to individuals, not to public boards—that though the trade showed decline, it would soon find its proper level; and intimated that the loss of private property was a matter of private, not public consideration, and that the whole fishery had already received too much of the national support! I was quite amazed with his reasoning, which was completely in opposition to what his letter had led us to expect. I found, however, that his object was now to get rid of me

and our proposal in the best way he could ! Mr. Barrow happened, in the course of the interview, to suggest that the Board of Longitude, of which he was a member, had it in their power to spend £5000 annually in valuable discoveries, and he stated he would throw out a hint at the next meeting of the Board, which was to take place on the day following, that a premium of £2000 be offered for circumnavigating Spitzbergen. On this hint Mr. Robinson immediately seized, and through it took the opportunity of disengaging himself both of me and my proposition ! However indignant I felt at this treatment, I found I had no redress without subjecting myself to trouble and expense, and, after all, with no certainty of obtaining it. I was, therefore, compelled to submit to be dismissed without recompense or even apology ! Mr. Barrow, as he had suggested, made the proposal to the Board of Longitude, to offer a premium for the circumnavigation of Spitzbergen ; but it did not appear to the Board that this was an object contemplated in the act that authorized the grant ; it was, therefore, dismissed. This was now the second time I had been invited to London by a public board, on public service, and the second time I had been involved in the expenses of my journey without any remuneration whatever."

During his stay in London, Mr. Scoresby was highly gratified by the cordial reception he met with at the hands of Sir Humphrey Davy. The warmth and earnestness with which this highly-gifted philosopher entered into any scheme calculated to promote the interests of

science or the general good of the nation could not fail to afford a pleasing contrast to the obvious *insouciance* of a public board. Being still very desirous on his own part to ameliorate, to the utmost of his power, the condition of those employed in the whale-fishery, Mr. Scoresby did not consider it presumptuous to solicit from the Admiralty the loan of certain instruments whose accuracy could not be discredited. With this intention he gladly availed himself of Sir Humphrey's proffered influence, the result of whose application appears in the following note, dated 2d March, 1822:—

“DEAR SIR,—I have received your communication for the Royal Society, and I have perused it with much satisfaction and interest. I shall order it to be read next Thursday. I immediately wrote to Mr. Barrow on the subject of the chronometer and Azimuth compass; I enclose his answer,* which, I am sorry to say, is unfavourable. I shall, however, speak to some of the leading scientific members of the Board of Longitude on the subject, and if I can procure the instruments for you before the 20th I will order them to be sent to you. I fear, however, this will be barely possible.—I am, dear sir, very sincerely yours,

(Signed) “H. DAVY.”

“William Scoresby, Esq., Jun.”

“ADMIRALTY, 2d March, 1822.

* “MY DEAR SIR,—I have shown Mr. Scoresby's letter to Lord Melville, but he observed merely that we have no authority to dispose of His Majesty's property to private ships; and I believe the Board of Longitude has as little. Mr. Scoresby must, therefore, do the best he can with his private means.—I am, my dear Sir, very faithfully yours,

(Signed) “JOHN BARROW.

“Sir H. Davy.”

CHAPTER X.

RETREAT OF THE WHALE TO THE EAST COAST OF GREENLAND—INACCURACIES OF THE GREENLAND CHARTS—HISTORY OF THE NORWEGIAN COLONIES—LOSS OF HARPOONER—GREENLAND—CURIOUS APPEARANCE OF HIS FATHER'S SHIP—RESEARCHES IN GREENLAND—HOMEWARD VOYAGE—LOSS OF HARPOONER—ARRIVAL AT LIVERPOOL—DEATH OF HIS WIFE.

1822.

THE whale, notwithstanding its incomparable magnitude and strength, is by nature both timid and shy, and although it may on rare occasions manifest a vindictive spirit (especially when accompanied by a cub) and turn with irresistible violence upon its pursuers, yet its usual practice is to trust to its fugitive rather than to its combative powers. What may be said of an individual in this respect is equally true of the whole tribe, they never herd together for offensive or defensive purposes.* Hence it happened that the fishing grounds from time to time changed their position; from the harbours of Jan Mayen, for instance, the whales retreated to those of Spitzbergen; driven thence, they sought refuge in the western ice and so on, until, as we have seen, they led their pursuers to the long lost east coast of Greenland. Mr. Scoresby was impelled by various reasons to select the Greenland fishing stations in preference to those of Spitzbergen in his pen-

* The walrus, on the other hand, is bold enough to attack a boat, and they are said to help each other.

ultimate voyage; and he was determined—so far as his own individual efforts could effect it, by a careful and judicious employment of such periods in the voyage as were unavailable for the fishery—to pursue a systematic course of geographical and hydrographical inquiry, whereby the navigation of this almost unknown coast might be rendered less difficult and dangerous. “The charts of this country,” he says, “were a snare rather than a safeguard to the navigator;” and, indeed, he subsequently discovered that in the 75th parallel the true longitude differed from that given in the best charts about 7°, “and from that given to it by the charts published for the use of the whale-fishers 820 miles of longitude, or nearly 14°!” A portion of the east coast of Greenland, between the parallels 72° and 73°, was discovered by Hudson in 1607; but beyond this, if we except a few isolated observations by whalers since the fishery had approached the coast, nothing was known of it; so that Mr. Scoresby’s researches must be regarded as entirely original discoveries. Curiosity about the fate of the ancient Norwegian colonies was another potent reason for the selection of the Greenland fishery; for Mr. Scoresby believed that some tidings of the colonists might still be met with if a landing could be effected on the east coast.

The history of the colonies may be given in a few words. From Iceland—itself a Norwegian colony—Eric Rauda, having committed a serious crime (probably murder*), fled in 981 or 982. Taking his departure from the port of

* His father is said to have quitted Norway on account of a like crime.

Snoefellzness, in the western extremity of the island, he speedily fell in with Greenland, where he landed, and spent the greater part of three years in exploring a portion of it. Afterwards he returned to Iceland, where, having obtained a free pardon, he disseminated a most exaggerated report of the natural attractions of his newly discovered territory, representing it as not only rich in herbage, but likewise well stocked with cattle. The Icelanders, comparing this finished picture with the scantiness of their own country, were eager for emigration, and Eric Rauda quickly returned to what he designated the *green* land at the head of an exodus comprising twenty-five vessels laden with colonists of both sexes, together with their necessary stores. In 999, Leif, Eric Rauda's son, made a voyage into Norway, and whilst there, by the good counsel of the king, Olaus Tryggesson, was won from Paganism to the Christian faith. In the following year he returned to Greenland, accompanied by missionaries, in the hope of converting the entire colony; and happily he succeeded, for the poor benighted creatures received with joy the tidings of the gospel dispensation. For several centuries after this the colonies seem to have prospered; they were divided into two settlements, both extending from Cape Farewell towards the north—the one on the east coast, the other on the west; the former called Osterbygd, the latter Westerbygd. In both were many towns and hamlets containing churches and convents; but the eastern settlement was the more extensive, and contained, in the town of Garde, the bishop's residence. The descendants of the original settlers appear to

have flourished under Norwegian government until 1256, when the colony rebelled against Magnus, King of Norway, but was reduced to submission by a naval armament despatched against them by Eric, King of Denmark, Magnus's uncle-in-law. The approach to the east coast appears to have been by no means difficult in remote times, so that a constant correspondence was kept up between that settlement and Norway. The colonists on the western coast, it is generally believed, were destroyed by the Skroellings or wild Greenlanders; but the fate of those on the eastern side is wrapped in mystery. The *Black Death*, a disease which scourged the northern part of Europe in 1348, is by some supposed to have extinguished the colony, especially since many of the sailors trading between Norway and Greenland died of it; but such could not be the case, as there are records of a later date. There is no doubt, however, that about this period the communication with Norway began to slacken. During the reign of Queen Margaret—in whom the crowns of Denmark and Norway were united—a feeble attempt was made to maintain a communication with her Greenland colony; but she became at length so embarrassed with hostilities at home as to be oblivious of her more remote subjects. Since the close of the fourteenth century the east coast of Greenland has been completely blockaded by an impassable barrier of ice, through which, though it has been frequently attempted by Norwegians, Danes, and English, a passage has never been effected. In the opinion that the colonists of the east side had been completely annihilated, whether by sickness or by the

aborigines, Mr. Scoresby did not concur ; on the contrary, he believed that descendants of that hardy race would still be found were it possible to reach the site of the colony ; but whether they would be met with in their original state of civilization or in a nearly barbarous condition and mixed with the wild Greenlanders, he did not attempt to conjecture.

The *Baffin* sailed from Liverpool on the 18th of March 1822, and proceeded directly to about the 80th parallel, a latitude far too high for any traces of the colonists ; and, as it turned out, quite unproductive of cargo ; so that, about the middle of May, Mr. Scoresby determined to return to the southern stations, below the 77th parallel.*

On the 20th of May a melancholy accident happened which gave rise to a curious calculation by Mr. Scoresby of the suddenness with which the death of one of his harpooneers occurred. He relates the following circumstances in his journal:—

“As soon as they [the boats] came within hail, my anxiety induced me to call out, and inquire what had happened. ‘A bad misfortune indeed,’ replied the officer commanding the first boat, ‘*We have lost Carr!*’ This awful intelligence, for which we were altogether unpre-

* An account of this voyage was published by Messrs. Constable in 1823 ; but the work has been for many years out of print. It relates some very interesting scientific investigations which were conducted during the voyage ; but in order to render this memoir as intelligible and interesting as possible to the general reader, I have thought it better to record in a single chapter the history of Mr. Scoresby's labours in magnetism.

pared, shocked me exceedingly; and it was some time before I was able to inquire into the particulars of the accident, which had deprived us of one of our shipmates. As far as could be collected from the confused accounts of the crew of the boat, of which he went out in charge, the circumstances were as follow: The two boats that had been so long absent had, on the outset, separated from their companions; and, allured by the chase of a whale and the fineness of the weather, they proceeded until they were far out of sight of the ship. The whale they pursued led them into a vast shoal of the species. They were, indeed, so numerous that their 'blowing' was incessant; and they believed they could not have seen less than a hundred. Fearful of alarming them without striking any, they remained for some time motionless, watching for a favourable opportunity to commence an attack. One of them at length arose so near the boat of which William Carr was harpooneer, that he ventured to pull towards it, though it was meeting him, and afforded but an indifferent chance of success. He, however, fatally for himself, succeeded in harpooning it. The boat and fish passing each other with great rapidity after the stroke, the line was jerked out of its place, and, instead of 'running' over the stern, was thrown over the gunwale; its pressure in this unfavourable position so careened the boat, that the side sank below the water, and it began to fill. In this emergency the harpooneer, who was a fine active fellow, seized the bight of the line, and attempted to relieve the boat, by restoring it to its place; but by some singular circumstance which could not be

accounted for, a turn of the line flew over his arm, in an instant dragged him overboard, and plunged him under water to rise no more! So sudden was the accident that only one man, who had his eye upon him at the time, was aware of what had happened; so that when the boat righted, which it immediately did, though half full of water, they all at once, on looking round at an exclamation from the man who had seen him launched overboard, inquired what had got Carr! It is scarcely possible to imagine a death more awfully sudden and unexpected. The murderous bullet, when it makes its way through the air with a velocity that renders it invisible, and seems not to require a moment for its flight, rarely produces so instantaneous destruction. The velocity of the whale on its first descent is usually (as I have proved by experiment) about eight or nine miles per hour, or thirteen to fifteen feet per second. Now, as this unfortunate man was occupied in adjusting the line at the very water's edge, when it must have been perfectly tight, in consequence of the obstruction to its running out of the boat, the interval between the fastening of the line about him and his disappearance could not have exceeded the third part of a second of time; for in one second only he must have been dragged to the depth of ten or twelve feet! The accident was, indeed, so instantaneous that he had not time for the least exclamation; and the person who witnessed his extraordinary removal observed, that it was so exceedingly quick, that although his eye was upon him at the instant, he could scarcely distinguish the object as it disappeared."

To this awful event Mr. Scoresby reverts in his notes of the circumstances which occurred on the following Sabbath:—

“On the 23d,” he writes, “being Sunday, we rested. We had public worship as usual; the weather being calm during the service in the forenoon, all hands were enabled to attend. The arduous, yet unsuccessful labours of the preceding week, rendered repose from the busy cares of our profession particularly acceptable; and the melancholy loss of one of our number had a solemnizing effect on every mind that was extremely favourable for devotion. As my crew were entirely dependent on me for religious instruction, I thought it my duty to address them, with the particular view of improving the serious impression evidently made upon them by the awful death of William Carr. He was much esteemed by all on board: he was the bosom friend of one or two; the messmate and watchmate of many; the kind companion of all. All, therefore, knew and respected him, and were deeply interested in his fate. The consciousness that his fate might have been any of theirs, naturally led to the personal inquiry, whether they were prepared to meet their God. The consciences of some, no doubt, replied in the negative. They perhaps discovered for the first time that religion was not a mere name, or profession only, but an active internal principle; and that its general acknowledgment, or even the performance of its outward duties, could not benefit them without their partaking of its personal influence. The solemn demeanour and striking attention

[illegible]

The following is a list of the names of the persons who have been appointed to the various positions of the Board of Directors of the City of New York, for the year 1900:

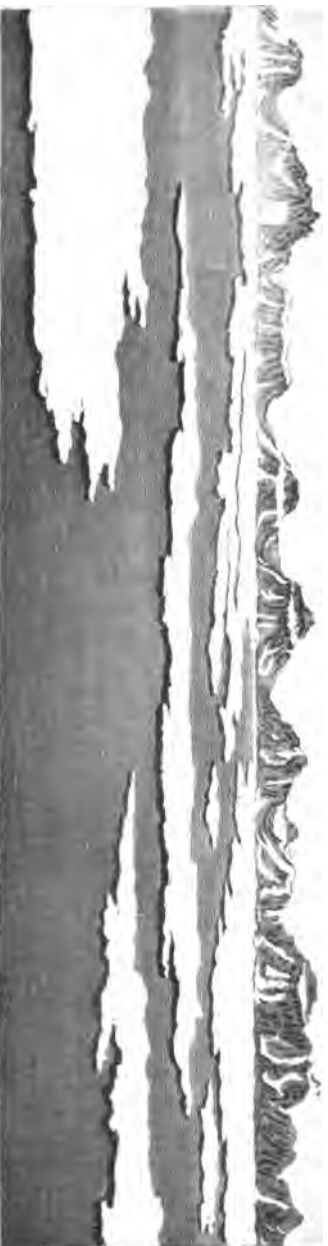
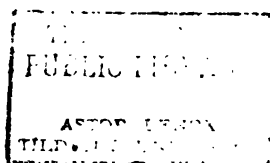


Fig. 1. View of the bay from the shore. The bay is situated in the center of the island. The bay is surrounded by hills and mountains. The bay is a large body of water. The bay is a natural harbor. The bay is a beautiful sight. The bay is a great place to visit. The bay is a wonderful place to live. The bay is a great place to work. The bay is a great place to play. The bay is a great place to relax. The bay is a great place to enjoy. The bay is a great place to be. The bay is a great place to live. The bay is a great place to work. The bay is a great place to play. The bay is a great place to relax. The bay is a great place to enjoy. The bay is a great place to be.



of our little company marked the interest which every one felt on the occasion. The eyes of many strongly indicated the deep emotions of their hearts; and the weather-beaten cheeks of some were suffused with a copious flow of tears, that forcibly displayed the powerful feelings of benevolence or devotion by which they were impressed."

On the 8th of June the *Baffin* made the land in latitude $74^{\circ} 6'$, at the distance of about fifty miles. "This," Mr. Scoresby says, "was the eastern coast of GREENLAND, being an extension or continuation towards the north of that coast on which the ancient Icelandic colonies were planted in the tenth century. I looked on it with intense interest, and flattered myself with the hope of being able to land upon some of its picturesque crags, where European foot had never trod. . . . As the main design of my voyage was fortunately compatible with researches about this unknown region, I determined immediately to penetrate, as far as possible, towards the shore."

On the evening of the 24th of July—the day on which Mr. Scoresby landed in Greenland for the first time—a singular atmospheric phenomenon occurred, whereby he was made aware of his father's approach, whilst his vessel (the *Fame*) was yet considerably below the horizon. The journal gives the following account of it:—

"On my return to the ship, about 11 o'clock, the night

was beautifully fine, and the air quite mild. The atmosphere, in consequence of the warmth, being in a highly refractive state, a great many curious appearances were presented by the land and icebergs. The most extraordinary effect of this state of the atmosphere, however, was the distinct inverted image of a ship in the clear sky, over the middle of the large bay or inlet, the ship itself being entirely beyond the horizon. Appearances of this kind I have before noticed, but the peculiarities of this were, the perfection of the image, and the great distance of the vessel that it represented. It was so extremely well defined, that when examined with a telescope, by Dolland, I could distinguish every sail, the general 'rig of the ship,' and its particular character; in-somuch that I confidently pronounced it to be my father's ship, the *Fame*, which it afterwards proved to be, though, on comparing notes with my father, I found that our relative position at the time gave our distance from one another very nearly thirty miles, being about seventeen miles beyond the horizon, and some leagues beyond the limit of direct vision."

Between the 24th of July and 27th of August, when the *Baffin* left Greenland, Mr. Scoresby made several excursions on shore, for the purpose of examining the general appearance of the country. The extent of littoral survey, in the most direct line, was 400 miles, but by reason of the sinuosities of the coast, twice that distance might be stated. The portion extending from $69^{\circ}30'$ to $72^{\circ}30'$ was surveyed whilst the *Baffin* was close to the land,

and the remainder, although laid down at a greater distance, was, from the boldness of its outline, drawn with great accuracy; fifty different stations having been employed during the process. The map which accompanies this book bears the names applied to the various sounds, bays, headlands, and so on, by Mr. Scoresby; and it appears remarkable that in the Admiralty charts this nomenclature was for many years ignored. It is true the Government fitted out an expedition in the following year to examine the coast, of which by that time Mr. Scoresby had published an account; but, when the difference between the charts of the two navigators was found to be almost imperceptible, it would have been courteous in the Government to have given Mr. Scoresby the credit of priority in research.*

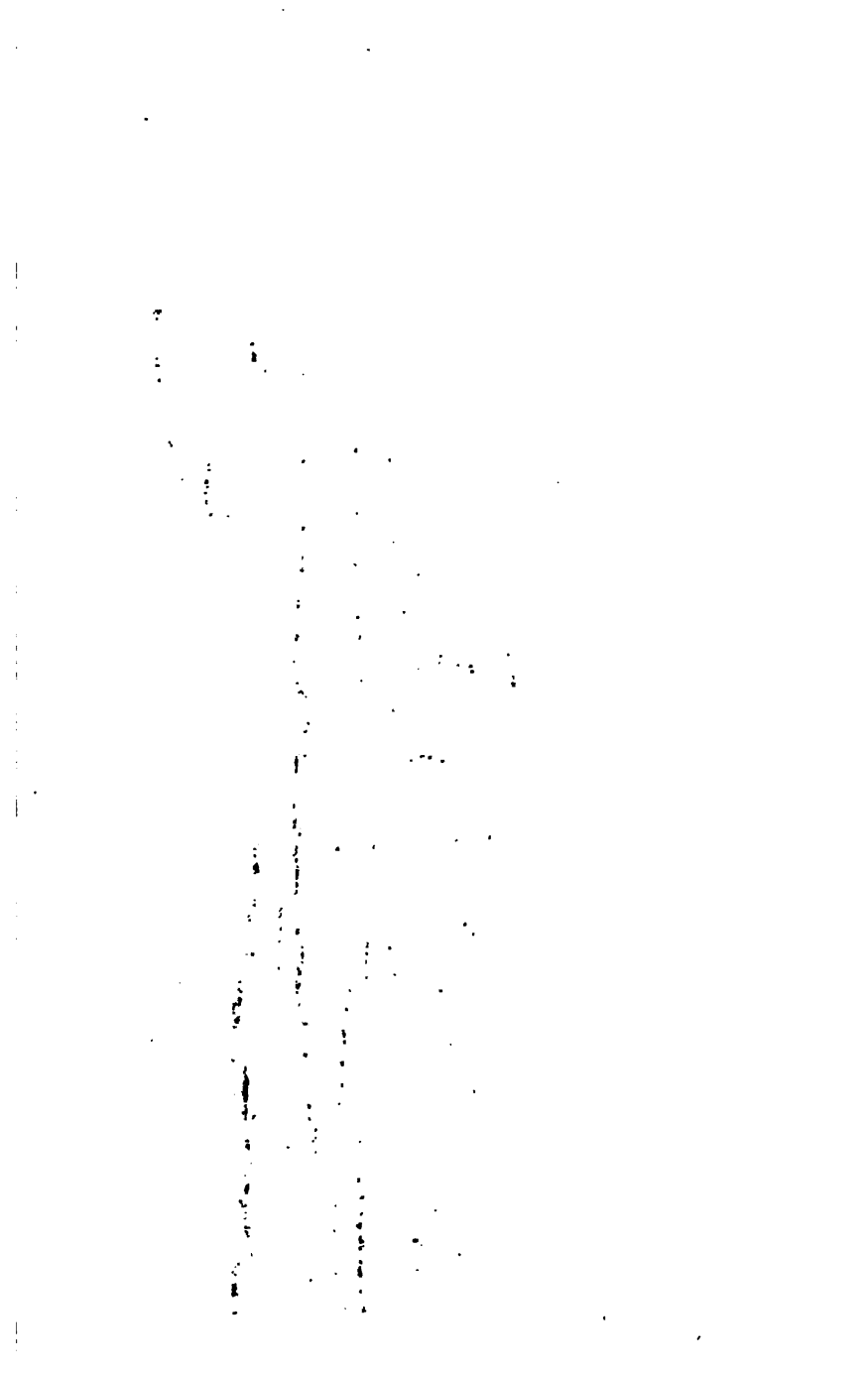
The average elevation of the coast Mr. Scoresby ascertained to be about 3000 feet, the general aspect of the country being "barren, rugged, and mountainous." He

* Mr. Scoresby has inscribed the following "REMARKS" on his original MS. Chart:—

"The northern part of the coast comprised in this chart, was visited by Captain Clavering, R.N., Admiralty Research, in 1823, who, being later in the season, was enabled to get close in shore, and so as to correct the coast-line from latitude $73\frac{1}{2}^{\circ}$ towards the north. Considering that my nearest approach to the land was a distance of from 40 to 45 geographical miles, and that I had but one chronometer, and that a second-rate instrument, the accordance betwixt $73^{\circ} 30'$ and $74^{\circ} 20'$ must be considered as very remarkable; the position of JACKSON ISLAND, with the headland of GALE HAMKE'S BAY and CAPE BROER RUY, being all but identical. Thus, Captain C. having landed on JACKSON ISLAND, found its latitude $73^{\circ} 56'$, the *precise latitude* given to it in my published *Journal*, p. 464. It is remarkable that Captain C. makes no mention of my observations on these northern coasts in his *Journal* till his arrival at CAPE PARRY, though my *Voyage* was published two months before his departure. The points of coast laid down by me betwixt CAPE BROER RUY and CAPE PARRY are, obviously, so accordant with the determinations by Captain C., as by no means to justify any alteration of the names attached by me."

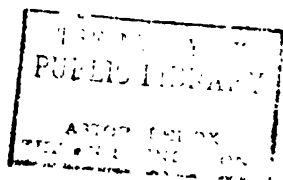
made frequent tours in quest of specimens of the natural products of the country, of which he obtained a valuable collection, having frequently prosecuted his search for them in positions of imminent peril, as we learn from the following account of one, undertaken on the 10th of August, to the Vandyke Cliffs:—

“After one unsuccessful attempt to ascend, I entered upon a slope included between two precipitous rocks, and with much labour accomplished about 500 feet, above which, the cliff rising vertically, prevented further progress in that direction; but, after skirting the brow of another precipice below me, where the inclination was at least 50° , and the surface entirely composed of loose, sharp stones, I reached the bottom of a chasm between two prodigious pinnacles, and again proceeded upward. This attempt, which I was induced to undertake for the purpose of collecting specimens of the rocks and plants, eventually assumed such a hazardous aspect, that I would gladly have relinquished it, could I have conveniently returned. The rocks of the pinnacles bounding the chasm, distant about twenty feet from each other, were vertical on both sides. One of these rocks, which was greatly decomposed and broken, so as to afford by no means a firm hold, I was obliged to grasp with my left hand, and to thrust my right hand among the loose stones, while every step was accomplished; and it frequently required considerable deliberation before a second step could be attempted. A slip of the foot here might have been fatal, as the bottom of the chasm opened on a precipice of 400 or



The City of New York, as seen from the Hudson River, looking
 down the river, from the Battery, New York City, N. Y.





500 feet, over which, whenever I moved, a large shower of the loose stones about me were immediately precipitated. At the top I expected to find at least some portion of flat surface, that I hoped would repay me by its productions, for the hazardous exploit into which my anxiety for specimens of minerals, plants, and animals, had unexpectedly betrayed me. But, to my surprise, the top proved to be a ridge (with the sea on both sides), narrower and sharper than the top of the highest pitched roof. Here I rested for a few minutes, seated on the ridge, with a leg over each side, pointed to the water, under two terrific vertical pinnacles, between 200 and 300 feet in elevation. These actually vibrated with the force of the wind, and appeared altogether so shattered and unstable, that it was astonishing how they remained erect. I was far from being at ease in such a threatening situation, and therefore made a hasty retreat, by sliding down the side opposite to that by which I had ascended, a good deal rejoiced to find that this, being less steep, and not so dangerously interrupted by precipices, afforded a much safer descent than the other."

Of the ancient colonies Mr. Scoresby unfortunately obtained no direct information, though he believed that the traces of inhabitants which he met with were not entirely those of an uncivilized race, and therefore was led to the supposition that descendants of the colonists were still in existence. In a deserted hamlet, discovered at the foot of Neill's Cliff, he found several domestic implements, such as might have been chiefly the workman-

ship of Esquimaux, but with certain exceptions, indicating an admixture of European habits. He mentions, especially, a piece of unicorn's horn bearing marks of a drill, an instrument which the aborigines were not likely to have discovered the use of themselves; he likewise fell in with a wooden coffin, a circumstance which seemed to strengthen his opinion of the existence of an enlightened race.

Unfortunately, however, Mr. Scoresby was not at liberty to extend his researches at a time when he had overcome the greatest difficulty—that of approaching the coast—and when, as he assures us, there was nothing to prevent the *Baffin* sailing between the ice and the land, even down to Cape Farewell. Having obtained an excellent cargo, he very reluctantly wended his way through the maze of ice to the open sea, and lost sight of Greenland on the 27th of August.

The joy which the crew of the *Baffin* felt on returning home with a good cargo, after escaping so many perils, received a solemn check on the 11th of September, when they were overtaken by a violent storm off the Butt of the Lewis. On Mr. Scoresby the melancholy event which occurred during the storm exercised a solemnizing, and, probably, a very salutary influence; thus preparing him, in some measure, for the sad intelligence which awaited his arrival at home. The journal of the voyage gives the following account of the distressing incidents which attended the approach of the *Baffin* to Liverpool:—

“No water had yet been shipped,” speaking of the

storm on the 11th of September, " though the tremendous sea that was running was received upon the ship's quarter, or beam, being in a direction of all others the most dangerous. A fatal wave, however, at length struck the quarter with tremendous violence, and, throwing up a vast weight of water, carried along with it, in its passage across the deck, one of our harpooneers, or principal officers (who, along with several others, was employed on the weather-rail endeavouring to secure one of the boats hanging over the side), quite over the heads of his companions, and swept him overboard! Most of the crew being under water at the same time, his loss was not known until he was discovered just passing under the ship's stern, but out of reach, and lying apparently insensible upon the wave. He was only seen for a few seconds and then disappeared for ever.

" For some minutes it was not known who the sufferer was. Every one was greatly distressed, and each, in his anxious exclamations, revealed his fears for his friend. 'It is Shields' Jack,' cries one. 'No,' replies a voice of feeling self-congratulation, 'I am here.' 'It is Jack O'Neill,' exclaims another; 'Ay, poor fellow—it is Jack O'Neill.' But a dripping, stupor-struck sailor, clinging by the weather-rail, comes aft at the moment, and replies, 'No, I am here.' After a pause of suspense, one adds, 'It is Chambers.' 'Ah! it must be Sam Chambers,' cries another; and no voice contradicted the assertion, for his voice, poor sufferer, was already choked with the waters, and his spirit had fled to meet its GOD! Happily he was an excellent man, and there was no doubt with

those who knew his habitual piety, and consistency of conduct, that he was prepared to die."

"Here my original journal of this voyage closes. The melancholy and distressing intelligence that awaited my arrival at home prevented its being completed. Memory, however, requires no artificial aid to enable it to recall those circumstances, which the power of agonizing feelings has indelibly stamped upon the heart; but, on the contrary, in a case like this, it foregoes its natural frailty, and, as a great poet observes, becomes immortal.

"The pilot who was received on board off the Ormes' Head, from real or well-feigned ignorance, gave no satisfactory answers to my anxious inquiries respecting my family and friends. We were unable to reach our port on the day of his arrival. I had, therefore, to endure another night of suspense, which was productive of feelings of anxiety, so painful as entirely to subdue the pleasurable sensations natural to the expectation of reaching home, after a long and dangerous voyage. Next morning, aided by a strong flood-tide, we entered the channel; but before we could round the 'Black Rock,' to get into the Mersey, the tide failed us, and we were obliged to bring up.

"Numbers of boats and steam-vessels were passing and re-passing while we lay at anchor. Some of the former boarded us. They contained the friends of different individuals on board. I was in constant expectation of some person coming to inquire for one or other of our late officers and companions, whose death, during the voyage, we had to lament; and had the painful prospect

of communicating the distressing tidings to such inquirers, who must now look in vain for their friends. These feelings, however, were eventually absorbed in the heart-rending intelligence in store for myself.

“Notwithstanding the number of boats that came alongside, no information whatever respecting the welfare of my nearest connections, the subject now paramount in my mind, could be obtained. This surprising ignorance of so many persons, on a subject to which I was so much alive, increased my anxiety ; but on marking the countenances and conduct of the boatmen, there was so much of the appearance of unmeaning indifference, or ordinary cheerfulness, that no indication of concealment could be traced or suspected.

“At length, while pacing the deck with an intensity of anxiety, the bare remembrance of which, at the present moment, throws my whole frame into a tremor, I perceived a boat with passengers approaching. As it rapidly advanced before the wind and tide, I took the glass and descried the face of a friend. The first emotion in my mind, at this recognition, was that of hope. ‘He is a good man and cometh with good tidings !’ But on a second inspection of the boat, some peculiarities in the conduct of the passengers checked the transitory joy which this frail hope had created. The sail was taken down, and the men lay upon their oars, while the boat approached only under the influence of the tide. The kind consideration of my friends had, on former occasions, when they came to welcome my arrival, always relieved my suspense, while yet at a distance, by some

token of good news. Now, however, panting with agitation, I watched in vain for some encouraging action or word. I supposed they had not seen me. I showed myself at the gangway, but their averted faces and downcast looks too strongly indicated that they were the harbingers of sorrow. I could no longer sustain an agony of feeling which silence and uncertainty rendered intolerable. I called out, 'Is all well?' A languid look and an evasive reply confirmed my apprehension, and sank me in despair. I could no longer support myself on the deck. I rushed into my cabin. In a few minutes my friend was in my presence. I saw him struggling with himself, and about to endeavour, by a well-meant circumlocution, to break the dreadful tidings he had to communicate. 'Let me know,' cried I, 'the worst; tell it me at once.' He grasped my hand with the fervour of friendship, while the tear of sympathy gushed from his eyes. 'I am sorry'—(my agony obliged him to speak out),—Mrs. S. is no more."

In a few days after his arrival he wrote: "The Lord has been greatly and wonderfully merciful to me amid all my trials, and I have experienced the blessing of his supporting arm in the time of need." In November he sent to the Admiralty, through Sir Humphrey Davy, a copy of his chart of discoveries in Greenland, appending but one condition to it, "that no copy whatever, MS. or engraved, be taken of it; for," as he justly observed, "my expenses in instruments and apparatus for conducting these surveys have been considerable, and in reserv-

ing to myself the right of publication, I have some prospect of being repaid, at least in part."

From many years of practical experience, Mr. Scoresby had recognised the want of a form of prayer suited to the peculiar circumstances of sailors. *The Book of Common Prayer* of the Church of England was too long in its services, and, in many instances, not well adapted to the exigences of their situation. "For a form of prayer, however, it was not only the best model, but the best foundation," so that by abridging certain parts and adding to others,—as his knowledge of the seaman's character and requirements enabled him to do with advantage,—he constituted his SEAMAN'S PRAYER-BOOK, which was published in this year. It has been extensively employed by the captains of Greenland ships, and others, even to the abundant fulfilment of the desire expressed in its preface:—

"With regard to the additions to the Liturgy, I may observe that I am well aware they fall far below the sublimity of the original. But I make no apology; I have done my best. I have not sought so much to avoid the criticism of men as to acquit myself before God. It has been my anxious desire to produce a work that might encourage the performance of public worship in ships, and that might be useful in aiding my brother seamen in their voyage towards Zion. Though bold in what I have done, I have not, I trust, been presumptuous. I have sought the assistance of that blessed Spirit, by whose agency and help all holy things are produced.

And I now commend my humble attempt to the blessing of the Lord, the glory and acceptable worship of whom it is designed to promote."

He went to Edinburgh early in December, with a view of publishing his Journal immediately, but having been overtaken by a sudden illness at Carlisle, it was unavoidably delayed, and did not appear until the following May.

CHAPTER XL

SIR WALTER SCOTT—VOYAGE OF 1823—LEAVES THE SEA—LETTER TO MR. HODGSON—NOTE FROM PROFESSOR TRAILL—ENTERS AT QUEEN'S COLLEGE, CAMBRIDGE—VISIT TO PARIS.

1824.

DURING his stay in Edinburgh he made the acquaintance of Sir Walter Scott, and being invited to meet a party at his house on the Sabbath day, made the following steadfast reply: "I fear I cannot have the honour of waiting upon you on Sunday at dinner, agreeable to the arrangement you were so kind and polite as to propose. For some years, indeed, I have declined visiting on that day of the week ; though I readily and honestly acknowledge that in this instance the privation is greater than on any occasion that ever before occurred."

The voyage of 1823, whilst in detail parallel with those already related, was, in a commercial point of view, by no means a successful one ; nor was science much enriched by the few opportunities for research which it afforded. In Mr. Scoresby's own words : *—

" My late voyage has not turned to much account. I landed again, but made no discoveries of any moment in Greenland ; yet some investigations of a scientific nature were undertaken. A valuable dipping needle furnished

* Letter to Captain Manby.

to me (on loan) by the Board of Longitude, afforded some useful experiments ; and some new apparatus for the elicitation of magnetism by percussion was tried with astonishing effect. With the use only of two or three bars of iron and a hammer, a small steel wire of one hundred and seventy grains' weight was made to lift a nail of four times its magnitude, weighing an ounce and a half. I can now take a new piece of steel wire and can produce a degree of magnetism capable of lifting between one hundred and two hundred grains by the first four or five blows."

This voyage brought Mr. Scoresby's adventures in the Arctic regions to a close. He had been for some time considering the expediency of such a step, and had on several occasions hinted at the probability of his "taking his land tacks on board." He had conceived a deeply-rooted desire for the work of Christ's ministry, and immediately upon his return to Liverpool, made his intentions known to those with whom he was most intimate. In a letter to his friend, Mr. Hodgson, he wrote :—

"I am still disposed to the honourable occupation which I hinted to you ; and with this view I propose (D.V.), to enter at Cambridge as a ten years' man, of the nature of which arrangement Mr. Buddicom will give you all particulars, as well as the rest of my plans, if you mention to him in private that you are acquainted with my designs. My object in writing this note is the hope of prevailing on you to accompany me in this honourable

labour. There is, I acknowledge, much difficulty in the way,—the chief that I apprehend (though it is, perhaps, presumption to say so) being the classical knowledge,—especially Greek, of which I am entirely ignorant. With regard to other particulars, I shall no doubt obtain the needful if it be the design of God thus to employ me. He who puts it into my heart to endeavour to glorify Him, will, I trust and believe, give me the needful powers and the needful blessing.”

His deficiency in classical lore proved a formidable obstacle to his progress. Professor Traill says :^{*}—

“When he first proposed to become a clergyman, and asked my opinion as to his being able to acquire a sufficient knowledge of Latin and Greek (of both which he was then ignorant), I answered, ‘I know your perseverance and ability to master anything you undertake ; but consult your friend Dr. Wrangham, who will give you the best advice, and who probably knows some curate who will assist your studies, and, perhaps, will receive you as a boarder in his house during the time. You already are well versed in mathematics, and need no tutor for that branch.’ He immediately went to York, and Wrangham gave him the strong advice to board himself with a country clergyman whom he recommended for his piety and scholarship ; and the consequence was, that he was able to pass a respectable examination previous to ordination ; and his college confirmed this by

^{*} In a note to Mrs. Scoresby, 8th January, 1859.

the degree of D.D.,—a strong proof that he had acquired a good knowledge of the learned tongues, in addition to his stores of philosophical and theological knowledge."

Mr. Scoresby's name was entered at Queen's College, Cambridge, towards the end of the year 1823, as a ten years' man, he being too old to enter in the usual way. The routine of this method of obtaining a degree in divinity is explained in the following letter: *—

"I will just say in a dozen words that there is no mention whatever made in the University Statutes, that those who enter themselves for the degree of B.D. after twenty-four years of age should be in orders at *the time of entering*. They must be divines when they go up to keep their three terms and exercises, but those terms, &c., are not kept until the last *two years* of the ten, so that no difficulty seems likely to arise on this ground."

Towards the end of February Mr. Scoresby had occasion to visit London on private business. During his stay he was pressed to join some friends in Paris, and make a tour with them. He had long wished to visit Paris; for although he had been a great deal in *foreign lands*, he had experienced scarcely any opportunity of intercourse with foreigners, and having now a few days to spare, he determined upon an excursion to the French capital. The following extracts from his journal may be found interesting:—

* From Rev. Mr. Buddicom, 24th October 1823.

“ Being in London in the spring of the year 1824, and having a few days of leisure at command, I employed them in accomplishing a visit to Paris. Preferring a steam conveyance to any other, because of its complete ease to persons not disposed to sea sickness, and of the leisure it affords for reading, writing, and other amusing or useful occupations, I embarked on board the steam-vessel, the *Earl of Liverpool*, at the Tower Stairs, on the morning of the 3d of April, for *Calais*.

“ The train of objects and feelings that operated upon my mind was various and interesting. I first experienced the exciting effect of old associations on entering on a sea-voyage—these recalled an extraordinary mixture of pleasing and painful emotions. Then, roused by the sight of the *discovery* ships, now fitting for another adventurous voyage, my mind naturally turned to the contemplation of the scenes the voyagers had recently encountered ; whilst my imagination, rendered sensitive in regard to Polar scenes by long habit and adventure, carried my contemplation to the probable issue of the approaching undertaking. Vacillating for the want of facts and correct data for steadying the contemplation, the mind sweeps through the wide bounds of possibilities : it first imagines complete *success* attending the researches of the adventurous voyagers ; and then, failure and misfortune intercepting their career, and concluding by premature calamity the interesting investigations of these ice-bound regions surrounding the pole.

“ Whilst the mind was unconsciously carried, by the sight of these vessels, to the contemplation of Arctic scenes,

a new series of objects gave a fresh turn to its meditation. The *Ark*, or chapel for seamen, was the first object of this series, devoted to the dispensation of the gospel to this hardy and, until of late, neglected race of mankind ; then, the *Seaman's Hospital*, the *Grampus*, where the wants of the body were attended to in its multifarious state of disease ; next followed the *Marine School*, also consisting of a floating vessel, where the sailor is educated in that knowledge which is of the most practical importance in the arduous profession for which he is trained ; and, lastly, the princely *hospital* of *Greenwich*, in which the worn out veteran sailor reposes in a situation of safety, plenty, and peace.

“ Approaching Woolwich, on the marsh in the district of East Greenwich, a sudden change of feeling is produced by the view of three unsightly *gibbets*, whereon hang the bodies and osseous remains of several wretched men who had forfeited their lives to the laws of their country and of the civilized world, by the horrible crime of *piracy*. Four of these bodies seemed still to remain almost entire, whilst others had fallen quite away, and one bar held only the fragments of the osseous trunk of a long exposed body. A poor man was observed carefully searching the ground beneath the gibbets, and collecting, apparently, the scattered bones which had fallen from the decaying trunks above !

“ We then came to *Woolwich*, the celebrated school for military arts. The principal objects which caught the eye from the river, were the dockyard, arsenal, the barracks, and the *marsh*, where the practice of artillery,

mortars, and rockets is pursued. But the exterior of these buildings and grounds affords little idea of the interior departments of this interesting and well-conducted establishment. About a fortnight prior to this time I paid a visit to this extraordinary place. Under the guidance of Major Elliot of the Horse Artillery, I was shown the most interesting portions of the dockyard. The model-room is a most interesting exhibition, superior, I think, in interest, in proportion to its extent, to the 'Conservatoire des Arts et Metiers,' in Paris. On the practising ground, which I visited, Major Elliot kindly favoured me with the exhibition of thirty rockets fired in succession. Of these, I had the privilege of firing three: one at 750 yards from the target (a three-pound rocket), and two others at 1250 yards (twelve-pound rockets). These contained an explosive charge calculated to burst at 1200 yards, which it generally did within a very short limit. Many of the rockets flew very near the target. Their velocity was four seconds for 750 yards; and eight seconds for 1250 yards. The angle of elevation given was one degree for every 100 yards. A small allowance in lateral position, to compensate for action of the wind on the stick of the rocket, was made by the rocketeer according to his judgment determined by experience. The rockets are contained in a tube of 12 or 14 feet in length, open at both ends, and fixed upon a stand. The head of the rocket only is inserted, the stick being altogether outside, and the ignition is given by a port-fire. . . . :

"We soon arrived off Purfleet, the great dépôt of

gunpowder. This place, excepting the king's department, with a small military establishment, for the protection of the powder, &c., belongs to Mr. Whitbread. It is a mere village, and is remarkable for the peculiar restriction of tradesmen in it. One mechanic or artizan, only, of a particular class, is allowed to reside there—one butcher, one baker, one shoemaker, one barber, &c., &c.

“Lord Hudley's castle, which is seen to rise above the trees on the southern side, gave occasion for the mention of a curious trait in his character. The Bank of England, it is said, never issued but two notes of the value of £20,000. One of these is in Lord Hudley's possession, and is kept in a frame as a picture. There is a story told of the other that is curious, but as I have heard two or three versions of it, I will not vouch for its accuracy, though I daresay something of the kind actually occurred. A man of shabby or rather mean appearance, apparently a farmer of a vulgar order, called a few years ago at the Bank of England, and offered for smaller cash a note of £10,000. The clerk to whom it was presented, strongly suspicious, and, indeed, quite satisfied in his own mind that the man had not fairly obtained possession of it, began to question him about it. The man very quaintly replied that he could not exactly say how it came to be his, but if he should show them the *father* of it, they perhaps might guess; on which he pulled out a £20,000 note! ‘Here,’ said he, ‘is a £20,000 note, of which, I believe, there were never more than two, and I know where the other is!’ The other versions of this

story I now forget, but the *point* is somewhat similar, though the particulars differ. . . .

"The sea was smooth until we passed the North Foreland; a considerable swell then came up the Channel, which, taking the packet on the 'broad side,' soon produced on many of the passengers the painful, but uncom-miserated effects of sea sickness.

"At 10.25 P.M., exactly twelve hours after leaving the Tower Stairs, we hove to off the harbour-mouth of Calais, the tide being yet too low to permit our entrance into port. Soon after midnight we entered the port. In a few minutes the packet was moored alongside the quay, opposite a small pillar erected to commemorate the landing of Louis XVIII. at this place. Near to the pillar is the impression of a *foot*, cut in the pavement, to mark the spot on which he first stepped.

"Being totally unacquainted with the language, as *spoken* in the country,—neither being able to speak it myself nor to understand it when spoken,—I suffered much inconvenience on landing in France. Having, however, a tolerable knowledge of the written language, the conversational became progressively familiar to my ear; so that before I left France I was beginning to overcome the difficulties under which I at first laboured. . . .

"*Calais, Sunday, April 4.*—Finding, upon inquiry, that there was a small English chapel in Calais, I proceeded thither at eleven o'clock. I was much struck on observing a young lady, the daughter, as I understood, of the officiating clergyman, acting as clerk. She conducted the responses in a clear voice, and read remark-

ably well. Her age can scarcely exceed sixteen. The employing of his daughter in this capacity is probably a piece of necessary economy on the part of the worthy pastor, his income, as I understood, not exceeding £60 a year.

"*Paris, April 12.*—The meetings of the Institute are held weekly, on Mondays at three o'clock. At the request of M. Arago (the President), I inquired for him there to-day, and, before the meeting was constituted, had the honour to be introduced to several distinguished members; such were MM. Ampere, Cuvier, Admiral Count Rosily, Baron Humboldt, Lacépède, Gay Lussac, &c., &c. Lacépède, whose '*Histoire des Cétacées*' I had criticised in my '*Arctic Regions*,' was, nevertheless, very polite and friendly, and acknowledged that not having seen whales he had taken everything from research. Ampere offered to exhibit to me his electromagnetic experiments. Baron Humboldt, who had already taken the trouble to call twice upon me at my lodgings, expressed his intention of calling at a still earlier hour until he should find me. The rest of the gentlemen to whom I was introduced, likewise expressed in a complimentary manner their pleasure at seeing me. I was greatly surprised, before the business of the meeting began, to hear the president publicly announce my presence. I was also much gratified, before the meeting closed, by a note from Baron Cuvier, inviting me to dine with him on Saturday, concluding with these words, '*Si vous vous rendiez au Jardin des Plantes à quatre heures, M. Cuvier vous montrerait lui-même les collections.*'"

"April 14.—Was highly delighted by M. Ampere's electro-magnetic experiments* which he had the kindness to exhibit to me to-day. In the evening attended a conversazione at the house of M. Arago, where it was my privilege to be introduced to M. Cailliot, who travelled with the Pasha of Egypt towards the source of the Nile; to M. Simonoff, who has visited the Antarctic circle beyond the *ne plus ultra* of Cook, General Beaoy, M. Poisson, &c., &c. It was remarkable that the person who had been nearest to the South Pole; myself the nearest to the North Pole; Humboldt, who had been higher than any man upon a mountain, and deeper than any man in the earth; and M. Cailliot, who had approached nearest to the source of the Nile,—should all meet together in one party.

"April 17.—Had a great treat at the *Jardin des Plantes* to-day. What a prodigious and beautiful collection is Cuvier's! Spent a most delightful evening; his daughter speaks English fluently, and is a most agreeable, accomplished person.† The baron also speaks a little English, and understands it when spoken quite well.

"April 24.—The annual and general meeting of the four academies of the Institute met to-day in their handsome and capacious amphitheatre. On this occasion the

* Ampere regarded magnets as connecting bodies giving passage to electricity in a spiral direction.

† Clementine Cuvier was a member of the Lutheran Church,—a devoted, zealous Christian. She died in the peace of Jesus Christ on the 28th of September 1828. The 25th of August had been appointed for her marriage-day. "We must be resigned," she said; "do not murmur. Without doubt, I shall be grieved to leave so many persons whom I love; but if it be the will of God, I am ready." Baron Cuvier died on the 18th of May 1832.

place was crowded with company, and enlivened by the presence of a considerable number of elegantly dressed ladies. Four papers were read: one by the president, and three others by members of three of the classes. The visitors were admitted by ticket, and were apart from the members; but, through the kindness and influence of M. Arago, I was honoured with a member's seat, being placed between himself and Gay Lussac.

"April 28.—The *Société Biblique Protestante de Paris* met this morning at twelve. Before the meeting, I was presented by Mr. Wilks to the president, M. le Marquis de Jancourt, Baron de Stael, &c. The meeting was held in a very commodious room, and was well attended. Many ladies were present; and the platform, though large, was covered with men of the first respectability. The effect of the speeches, even upon a person imperfectly understanding the language, was very good. The highly respectable character of the meeting, and the number who attended, afforded the encouraging hope that the number of believing people in France is greater than at first sight might be calculated upon. When a Christian man enters France, and observes the refinements of vice, the great disregard of religion, the general disbelief of the Scriptures, and the almost total want of reverence for the Sabbath, his faith is liable to receive a severe shock in the inquiry, 'Can I be right and all this nation wrong? Can the Bible be true when so many disbelieve it? Can religion be a reality, and all these neglect it?' And he will be disposed to say with Elijah the prophet, 'The children of Israel have forsaken thy covenant, thrown

down thine altars, and slain thy prophets with the sword, and I, even I only, am left.' But he will find, on closer research, that there are thousands of men who have not bowed unto Baal. In the evening was at the annual meeting of the *Société d'Encouragement pour l'Industrie Nationale*, in their capacious rooms in the *Rue de Bac*. Gold and silver medals were awarded to several individuals after the report of the labours of the council of administration by Baron de Gérando, the secretary; a report of expenses for 1823, by M. le Comte Bigot de Préamessau; and a *Rapport sur la Comptabilité*, by Monseigneur le Duc de la Rochefoucauld, one of the censors. Before the meeting, I had the honour to be introduced to the Duke de la Rochefoucauld, a stout elderly gentleman; also to the Duke de Dondeauville, one of the vice-presidents, a pleasant, free, and sociable gentleman; and to the Count Chaptal, the president of the society.

"April 30.—Visited the *Conservatoire des Arts, &c.* Mr. Baume, who was lately attached to a diplomatic embassy in Italy, and some time secretary to the Prince Regent of Naples, accompanied me in this day's research. As we were crossing the *Place Victoire*, a gentleman, who hurried past us, attracted the attention of my companion. 'That man,' said he, 'is the greatest *chess-player* in Paris.' 'Can he beat the automaton?' I asked. 'He is the very man (Maelzel) who directs it. Did you ever see that machine?' continued Mr. B. 'I saw it, and conceive I discovered the principle.' 'You discovered the principle!—can you explain it?' I stated my opinion and conviction of its being regulated by a man inside,

and explained how he might be concealed.* He did not deny it ; but, to my great surprise, remarked, ‘ I am the proprietor of that machine ! ’ It appeared, from further conversation, that Maelzel had been introduced to Mr. Baume as a man of extraordinary genius in mechanics. Mr. B. had advanced him £1000 to carry out an invention, and for this the machine was given as security. It was afterwards, however, redeemed by Maelzel.”

The general impressions received from this visit to Paris are conveyed in the following remarks in a letter to Mr. Rathbone :—

“ I write from the metropolis of France, where I have already seen much to admire, much to amuse, and much to enable me to set an additional value upon the benefits and advantages of my own country. Being desirous of seeing France as it is, I endeavour to see all I can of the Parisians,—eat of French dishes, and pay most particular attention to those things which are really French. I find, however, that the great intercourse with the English of late years has modified, to a perceptible extent, the manners of the people, both here and in many of the towns through which I have passed. English comforts are beginning to find their way into many houses. Cleanliness seems to be becoming, in certain ranks at least, more a matter of consequence ; and those disgusting

* A very interesting paper, entitled “ Investigations of the Principle of the Automaton Chess-Player,” had been read previous to this, by Mr. Scoresby, before the Liverpool Literary and Scientific Society.

scenes which used to be often exhibited are now seldom to be seen within the barriers of the capital. I have received unbounded attention and kindness from several of the *learned men*, though I neglected to provide myself with many introductions which I might, with a little preparation, have had the advantage of. Having visited in some of the French homes, I have seen some good specimens of their manners within doors, and have experienced something of their hospitality."

Mr. Scoresby left Paris on the 7th May, and travelled direct to London; he arrived in Liverpool on the 21st June, and on the 30th resumed his classical studies, which were continued unremittingly up to 16th September, "except eight days, when absent on a journey into Wales; and ten, when employed on a paper on the Polar Regions."

CHAPTER XII.

OBSTACLES—LETTER TO ARCHDEACON WRANGHAM—STRAY LEAF—LETTER
TO MRS. CLARK—F.R.S.—MEMORANDA—ORDINATION—CURATE OF RESS-
INGBY—FLOATING CHURCH.

1834-1837.

MANY obstacles were still to be overcome before Mr. Scoresby could offer himself for ordination. The circumstance of his having been engaged in secular concerns within the three years preceding, was a powerful one; but, through the kindness of Archdeacon Wrangham, who exerted his influence as far as possible in obviating difficulties, the barriers one by one fell away. The following letter to Dr. Wrangham will explain many of the regulations which it was necessary for Mr. Scoresby to satisfy :—

“Before replying to your obliging letter, it appeared to me desirable to ascertain whether I should have any difficulty in obtaining the requisite testimonial. One of the clergymen, to whom I was most particularly known, being from home, it was not until yesterday that I obtained his sentiments on the subject. He, I am happy to find, as well as two other beneficed clergymen (the only three to whom I have applied), gives me the greatest encouragement; and all three are so obliging as to say that they will have much pleasure in signing the requisite testimonial.

“ I have thought much respecting your kind suggestion of a title to a curacy with yourself. Should this be found practicable—in the hope that his grace the archbishop will be pleased to shorten as much as possible the period of my probation—I shall, without reservation, put myself entirely into your hands. The salary for a year or two is no essential object with me ; whatever, therefore, may suit your convenience, would be agreeable to me. The only other point to which you allude—namely, my doing the duty of the Church to which I am nominated for two years—is a condition to which, except in some extraordinary case, I have not the least objection. As I am very anxious to know the sentiments of the archbishop on the subject, you would perhaps have the goodness, at your early convenience, to lay the matter before him. The circumstance of my having left an employment which, for the last eleven years that I pursued it, has produced me an average income of £800 per annum, whilst I have no prospect or hope of emolument in the profession which I now desire to undertake beyond that of my ‘daily bread,’ will at once show that I do not seek to enter the Church with secular views ; and will also, I trust, plead for me with his grace for that obligation which I am induced to seek at his hands.”

A stray leaf from a note-book, dated 29th August 1824, has the following inscribed upon it by Mr. Scoresby :—

“ Read a considerable portion of the memoirs of Henry

Martyn, with an exalted sense of his piety and excellence, but with a most humiliating sense of my own idleness. My selfishness, my ingratitude to God, deadness to Christ, formality in worship, pride and vanity, appeared so great and overwhelming as to sink me below the level of all saints. God grant I may rise! God grant that these sins, and many others of which I am conscious, may be not only blotted out by the blood of Christ, but weakened daily in their influence, and finally destroyed. These sins tell me I am too depraved to be a suitable minister of Christ; but my chief and only hope is, that he who has, I trust, called me to this work, will meeten me for it. Give me, O Lord Jehovah, Christian meekness and self-denial; give me to despise self-praise, and never to seek the praise of others, but simply the glory of God. Lord grant me grace for daily acts of self-denial, frequent communion with thee, and meditation on thy word; and, the influence of thy Holy Spirit attending all, to grow in grace and in holiness. O that I were more holy, more entirely resigned to thy will, and separated from the world. God help my infirmities, and give me submission and devotedness to thee.

"12th Sept., Sunday.—Having heard two excellent sermons by Mr. Buddicom, and being enabled to see my want of resignation to the will of God, and to strive in prayer for a subdued mind, I was led to see very deeply my vast distance from the true Christian character. I found I was contenting myself with *no* attainments,—a few duties and weak inclinations, with but little effort to help myself, or to seek help of God. I found I was

almost entirely without *love* to God, without *faith* in Christ, without humility, without resignation. Lord, what a distance am I from thee! Bring me nigh by thy great mercy. In prayer I was driven from every point by want of faith or unworthiness. I tried the promises, but found I had not faith to apply them. I cried for faith, but wanted energy and power. I tried to realize the promise, 'Ask, and ye shall receive,' but I am so destitute of faith that I found I should not receive, because I asked amiss. Lord, remove my spiritual indispositions. Give me faith, Christ, thy Spirit, a humble broken heart, diligent industry in the search after God, meditation in thy word and attributes. Yea, Lord, give me *everything*; for *I am destitute of all, and unworthy of all!* Lord Jesus, *help me.*"

The following letter to Mrs. Clark is one in which his delight in communicating his own experience of the comforts of true religion is fully expressed:—

"WHITBY, 31st October 1824.

"MY DEAR SISTER,—It is with a peculiar pleasure that I attempt the task you requested of me, that I would give you some hints respecting the *nature* and *practice* of a religious life. Though there are many published tracts and books which contain much better descriptions of these important matters than I can give, yet I do not shrink from the task, because I flatter myself that what I write will have some weight in your esteem, on account of the affection to you by which it is

dictated. And it is my humble prayer to Almighty God that he may, by his enlightening Spirit, give me the wisdom and discretion that is needful that I may write that which, under his own blessing, may be useful to you in the most important of all concerns, your immortal interests and eternal welfare :—

“I. In respect of the *nature* of a religious life, I need say but little. It is that condition and habit of mind which enables and disposes us to live the life of faith upon God. It disposes us to fear and love the Lord, and to perform no act of life without a reference to his approbation. It induces us to seek for the favour of God, by obedience to his commands, as the greatest end of life ; and shows us by experience that ‘his ways are ways of pleasantness,’ and that ‘all his paths are peace.’ In *difficulties* it brings us to his footstool, and there we spread our case before him ; in *danger* it enables us to cry with hope and confidence unto him ; in *distress* it disposes us to seek to know his will in the trial, and to reap benefit from every afflictive dispensation of his providence. We view him, in short, as the hearer and the answerer of prayer ; and we esteem him as our now reconciled *Father* through faith in Jesus Christ. And as a father pitieth his children, we find he pities them who fear him ; and we are enabled to look upon him, not as an angry judge, but as a tender and affectionate parent ! Thus we receive supports under affliction, confidence in danger, and comfort under privations, of which the world is totally destitute and ignorant. We are enabled then to rejoice in tribulation, because we see the hand of a

Father chastening us, and evincing his love to us by taking this means to bring us to himself; and we are enabled often to smile and be happy even in the prospect of almost immediate death. Religion thus moderates and sanctifies the evils of life, whilst it refines and elevates whatever is good. It denies *no pleasure* but that which is hurtful to us. Our duty and our happiness always go hand in hand. No good thing is withheld from those who love the Lord. Religion induces us to seek our happiness in holy things, and to lay up our *treasure* in heaven. Worldly things it makes us esteem less and less; and, if its office be fully accomplished, it enables us to view them with comparative contempt. It is evident God could have made all men wealthy if wealth had been good for us; but where it was given, as in Sodom and Gomorrah, the inhabitants became so wicked that they drew upon themselves an especial judgment from God. Besides, it is evident, that had God pleased, or had he seen that it would be good for us, he could have given us all the necessities of life without labour. Clothing would have been given us like the clothing of other animals; and houses might have been provided for us as is the habitation of all shell-fish; and provision prepared for us merely for the gathering. But labour was needful to man's happiness, and needful as a means of preventing the world being completely desolated by wickedness. But I find I am wandering a little from my subject, and therefore shall proceed to the second point to be mentioned, namely,—

“II. THE PRACTICE OF A RELIGIOUS LIFE.—Real

religion, and saving religion, commences with a *change of heart*. All mankind, naturally, are in a state of condemnation from sin, being under the curse of the law which they have broken in ten thousands of instances. And there is no reconciliation with God until the righteousness of Christ is imputed to us as the only payment which will be received for the debts we owe to God, and which we ourselves are totally incompetent to pay. The natural condition of every one's heart is rebellion against God. But this rebellion is of different shades and kinds. With some it exhibits itself in the gross vices which stalk abroad in the open day, and proclaim to the world that the man who practises them is a sinner; but with others it is so refined and well-concealed, exhibiting itself, perhaps, scarcely at all to the world, and being discoverable only in the possessor by the enlightening influence of the Spirit of God applying to his heart the Scriptures of truth. One character, however, is common to all the unregenerated, namely, a want of entire submission and obedience to the will of God, and some secret indulgences which we are not inclined to part with. But there possibly may be a condition where the mind is willing to give itself up to God, but not willing to make any effort for itself; or, if it make any effort, it is feeble and interrupted, and exceedingly imperfect. Or, there may be another condition, where the mind, being impressed with some sense of the value of religion, feels disposed to receive it and embrace the practice of a holy life, but where it is prevented, either by domestic ties and hindrances, or by a want of proper resolution, so

that it puts off the important work from day to day, and year to year, continually looking forward to a more remote time, when it is supposed that it will be able to undertake and effect the holy purposes which it has so long designed. I shall not stop here to show the danger of this delay, nor to attempt to mark the various devices by which Satan retards the progress of Christian life, or induces the well-disposed mind to relinquish the needful exertion and means ; but I shall pass on to the consideration of the means of accomplishing, under the blessing of the Lord Jesus, that work of salvation in our own hearts, which we are commanded 'to work out with fear and trembling,' remembering that it is God who worketh in us to will and to do,—

“ 1. I should first recommend to you, my dear sister, the practice of *regular prayer* to God in private, and of *reading the Bible*. It is as impossible for the natural man to live without food, as for the Christian to retain his Christianity without prayer. Our Lord taught his disciples to pray ; and he regards the solicitations of the weakest suppliant, and is willing to grant his Holy Spirit to help our infirmities. Some people cannot find time or opportunity for prayer and reading the Bible ; should this be a temptation to you, let me assure you it is a deceit of Satan. Every one may find time if he will, and every one ought ; because, if religion deserves anything, it deserves some of our time ; and as it is the great concern of life, it deserves time necessary for its duties, *whatever else be sacrificed*. But it ought to be regular, and *never omitted*. A few days' determined

perseverance in it would render it habitual, and the difficulties weaker and weaker; but one single neglect prepares the way for a second and a third. Reading the Bible for a few minutes before prayer will generally assist in the matter of prayer; but if not, a form of prayer, or the Collects of the Prayer Book, may be used as excellent helps.

"2. Diligent attention to all the means of grace is a most essential requisite. Now, for embracing this advantage, it is needful to become a fixed attendant at *one* place during *all* its services, both Sabbath and week-day, though this will not prevent your taking additional help, if you feel it profitable, at other places of worship in the intervals when there is no service in your own.

"I need not tell you, my dear Mary, that attendance at the house of God is not likely to be profitable unless due consideration be given to this important means of grace. To worship God aright, that is, so as to be profitable to our own souls, we must worship him in *spirit* and in *truth*. Before we go to the house of God, we should take opportunity of bowing our knees in prayer (if but for a moment), for the blessing of God on the service; for the hearing ear, the retentive memory, the believing and understanding heart, and for the obedient life. As we walk thither, our *hearts* should be lifted up to God, desiring communion with him, and with his Son, Jesus Christ. And we should take heed to be there in time, *before* the service begins; and any interval that we may have will be well bestowed in reading and meditating on the introductory sentences in the Prayer-

Book, which are taken from the Scriptures. Striving, then, to guard our hearts from wandering, we should follow every prayer, and endeavour to *appropriate* every petition to *ourselves*. In the Litany, in particular, we shall find petitions exactly suited to almost all our wants and feelings. In these, therefore, we have more than ordinary closeness to God, presenting to him the very petitions we should offer to him in private, and applying to his mercy in the responses. I need not tell you *how* to hear a sermon ; the object is, to hear (read), mark, learn, and inwardly digest it. It should be a matter of constant care with us to learn and remember something from every sermon. The effect of a sermon is good when it stirs us up to more watchfulness and greater earnestness in the religious life, or when it humbles our pride and weakens our self-confidence. And it is also good when it comforts and consoles us, provided that comfort and consolation be the result of dependence and confidence in God, and be attended with stronger desires after the salvation of Christ, and conformity to his example. It would be well to make every sermon the subject of a short meditation afterwards, that it may be impressed on the memory, and the more important parts preserved for practical application. It is very profitable to write down so much of the sermons we hear as we can remember, or, at least, the more important parts.

“ 3. The sanctifying of the Sabbath-day is, perhaps of all others, the most distinguishing mark of the Christian character, and, at the same time, the most important for obtaining comfort and benefit in religion. Religion

never does its duty until it produces, to a considerable extent, this effect. The day should be kept holy from morn till night. We should prepare for the duties of it on the night preceding, by having every arrangement for the family, that can be accomplished, made and completed—leaving nothing but works of *real necessity* or *charity* for the Sabbath. Our earliest thoughts should be lifted up to God; and we should hold a perpetual struggle against idle thoughts, and idle and worldly conversation. We should, by all means, and at any sacrifice, of a personal nature, *avoid Sunday visiting*—even with our most intimate friends. It is most inimical to holiness to go from home on the Sabbath, however friendly the visit may be, because the conversation being generally worldly, is the means of robbing God of a portion of his holy day, and of unfitting our minds for profiting either by what we have heard, or what we are about to hear. ‘If thou turn away thy foot from the Sabbath,’ saith Jehovah, ‘from doing thy *pleasure* on my holy day; and call the Sabbath a delight—holy of the Lord—honourable; and shalt honour him—*not doing thine own ways*, nor *finding thine own pleasure*, nor *speaking thine own words*; then shalt thou delight thyself in the Lord,’ &c., &c. (See Isa. lviii. 13, 14; Exod. xxxi. 13-17; Lev. xxiii. 32; Neh. xiii. 18; Isa. lvi. 2, &c.)

“4. Religious conversation is another useful means of grace. But this cannot so generally be practised except with persons who live in a religious family, or near religious friends. Yet, as occasion serves, it will be

found beneficial ; and let it be remembered that there is a peculiar blessing attached to it,—‘They that feared the Lord,’ saith the prophet Malachi, ‘spake often one to another ; and the Lord hearkened, and heard it, and a book of remembrance was written before him for them that feared the Lord, and that thought upon his name. And they shall be mine, saith the Lord of hosts, in that day when I make up my jewels ; and I will spare them, as a man spareth his own son, that serveth him’ (Ch. iii. 16, 17).

“ 5. But for all these things the blessing of Almighty God is necessary—absolutely necessary for our perseverance, decision, and success ; yet for these things God must be inquired of. They are the work of the Holy Spirit, and the Holy Spirit’s being given us, is the effect of Christ’s atonement. So that Christ is the foundation and occasion of all our mercies and all our graces. He is our ‘Physician,’ when the soul is sick ; our Saviour—our Prophet, our Priest, and our King ; and ‘is made of God unto us *wisdom, righteousness, sanctification, and redemption.*’ If we depend on ourselves we shall fail ; but if, using the means, and looking to Christ for help, we also depend on him, we shall succeed. With man the work is impossible. It is as easy for the leopard to change his spots ; yet such is the connection between the means and the end, that God is pledged to give us his Spirit, if we ask, and by his Spirit we can do all things. The simple process, then, is to read the New Testament with a view of getting a knowledge of Christ, and then to commit ourselves simply, and as little children, into

his hands—believing his faithfulness, and depending on his mercy and power. But we must not fail to seek divine aid. Our strength and resolution will be apt to fail; but we must be constantly on our guard, and ‘renew our strength by waiting upon the Lord, so that we may mount up as on the wings of an eagle—may run and not be weary—may walk and not faint.’

“6. The next means I have to mention, is the attendance at the *Sacrament*. As all the chief comforts of religion, and its highest enjoyments, as well as its blessings, are derived from Christ, it is of the first importance that the Saviour live in us, and we in him. In *his* ordinance of the Lord’s Supper, he often manifests himself to those who seek for him there, and is known to them, as to the disciples of old, in the breaking of bread. All the meetness which this ordinance requires is, that we feel the need of Christ, and desire to meet with him there.

“7. There is another remark that escaped me at the place in which it ought to have been brought in, which is this: It is found to be particularly useful for obtaining a religious *tone* of mind, to fix some text of Scripture on the memory every morning, and to meditate on it during every leisure moment that occurs during the day. A useful little book, called ‘Daily Bread,’ has a selection of texts for this purpose, which are very well selected—each text containing a precept and a promise. Some of the religious pocket-books contain the same sort of selection. Verses of hymns, learnt by heart, answer a useful pur-

pose in filling up intervals of leisure—particularly hymns of *petition* and *praise*.

“Thus, my dear sister, have I made a humble attempt to fulfil my promise. I feel that it is a very imperfect attempt. It has been drawn up under every disadvantage; without privacy—in a disturbed state of mind—and at different periods. Yet, under the blessing of God (as it is well intended), I hope it will be of some little use. But to make this, or anything else useful, the mind must make an effort. You are called upon no longer to *halt between two opinions*; if the Lord be God, follow him—but, if Baal, then follow him. You are convinced that the Lord is God; the duty, therefore, is an obvious one. The duty is to make a determined stand against all opposition, and all hindrances, both at home and abroad. As I have not neglected to *pray* over this letter, and for direction in writing to your edification, let my exertion be honoured in turn by your seeking the divine blessing upon it. Ask of God that he would apply, by his Holy Spirit, to your conscience, whatever I have written according to his will; and that what you yet see not, he would teach you.

“One more word of exhortation before I conclude. We live in a world full of evils, anxieties, and cares. We experience these evils like thick and impenetrable clouds surrounding us; but God is our refuge and defence, and a present help in time of trouble. Troubles are sent for our benefit, and they become blessings when they are sanctified. Every affliction has a voice from God, and is as a message from him unto us. Let us hearken to the

call, and take warning by the affliction—that instead of greater evils coming upon us, they may be converted into blessings. Turn, then, my dear Mary, unto the Lord Jesus, and make him the friend of your bosom and the desire of your heart. Pursue all the means of grace with the utmost diligence, as for your life. Stay not—look not back to the world—retreat not a single step—and do not stand still. But press forward for the prize of immortal glory—‘looking unto Jesus, the author and finisher of our faith.’ ‘Eye (truly) hath not seen, nor ear heard, neither hath it entered into the heart of man to conceive the blessings the Lord hath in store for those who love him.’ And that you, my dear sister, may be a partaker of that inestimable blessing, by being enabled to persevere diligently and unremittingly in the Christian course, is the sincere, the fervent prayer, of your affectionate brother and friend,

“WILLIAM SCORESBY, Junior.”

From a note-book, of which, unfortunately, but few pages have been employed, we obtain the following information respecting Mr. Scoresby's occupation during the remainder of the year 1824, and the early part of the succeeding year:—

“Towards the end of December I left home on a journey to London for the purpose of being presented to the Royal Society, of which I had been elected a Fellow in the preceding session, and with a view of taking

instructions for freeing myself from the remains of a provincial pronunciation.

"*March 13, 1825.*—On this, the Sabbath-day, I would earnestly ask the blessing of the Lord. I feel full of deadness and insensibility. Lord, quicken thou me. Let me feel the exceeding sinfulness of sin, and find peace in the knowledge and revelation of the Saviour. O that the Saviour were mine by the intimate union of the vine and its branches. May I become a lively stone in his spiritual building. Help me, O Lord, a sinful man—give me grace to move to thee—to pray—to believe—to employ thy promises—and to take the reality and the comfort of reconciliation through Christ."

"*Sabbath Evening, April 3, Easter Day.*—I spent the evening at home, after being twice at church, and occupied the interval of absence of my housekeeper at a meeting-house, in instructing my little Frederick. He was delighted to spend alone an hour in this occupation, and seemed to consider it quite as a privilege and a pleasure. He repeated to me a considerable catechism; on various parts of which I enlarged and explained, to his full comprehension of the subject. After this I took up the "*Memoirs of David Brainerd*," which I had commenced in the afternoon. I always find religious biography the most profitable of all reading, excepting the Scriptures, because it enables me, in the example, feelings, life, &c., of eminently pious men, to compare myself with them, and to observe my deficiencies. Brainerd shows me, in his description of his condition prior to his complete conversion, much of my own present state. I

perceive that a mighty work has yet to be accomplished in my heart before I be what I ought, or in the condition of any of the examples of holy men of whom I have read. I find that in attending divine service I regard not the glory of God, but only the quality of my own devotions and the result of my own feelings. I grieve for my wanderings of mind and insensibility, and conceive of my feelings as the cause of comfort and peace. I perceive I am in great error. May the Lord enlighten me, and deliver me from my entanglements! I begin to fear that my motives for entering the ministry are not so pure as they ought to be. I have been hitherto satisfied with them, because I have sacrificed all expectation of worldly emolument, and have abandoned a profession which has been profitable, and other chances of fresh employment which might have been still more so. But I fear much is still in the secret recesses of my heart that I scarcely dare draw out. I acknowledge without fear, and dwell upon without apprehension, the selfishness of deriving my own spiritual advancement as a very important end of my ministry; but I apprehend I have little true consciousness or anxiety, if any, for the *glory of God*. And I fear there is a secret lurking of the hope of popularity (which may the Lord in his mercy give me grace to abhor); and a something as the result of my desired ministry that may be gratifying to the flesh, notwithstanding other denials. O that the Lord Jesus would show me the pollution of my own heart and remove it—that he would give me deep and abiding humility, self-abasement, and a single eye to his glory! Search me,

O God, and know my thoughts ; try me, and know my ways, and see what evil ways are in me, and lead me in the way everlasting.

“ I have already read to the full conversion of Brainerd and to his reception of the comforts and assurances of religion, and how he leaves me far behind ! I want to know the Lord Jesus in spiritual communion. I want to feel myself in him, and him in me. I want to experience a deeper sense of my vileness and the exceeding sinfulness of sin. I want to approach God in prayer with a consciousness of his greatness and glory, and to realize his fatherly character in the face of his Anointed. Lord ! Lord ! help me !—a poor miserable, helpless sinner. Enable me to come to thee simply in thine own appointed way. Let me enjoy thy Sabbaths, rise above the world, feel abiding humility and self-abasement before thee ; let me be pure as thou art pure ; let me enjoy the pleasures of religion above all the enjoyments of the world—experience their exalted enjoyments, and feel the true Christian love for all my fellow-creatures.

“ O what exalted occasion for gratitude have I to God for his mercies to me ; and yet how little I feel impressed by them ! When I remember my delicate habit of body, that two years ago my lungs were in a very bad state—that twelve months ago I could bear no close application nor exposure to the weather, without immediately having a cough and slight pain in my chest, and now observe that I can study, with closest application, six or eight hours per day for four or five days in the week, and three or four hours per day the rest, and that without

injury to my health, I am astonished at such a mark of the blessing of God upon me; and this is the more remarkable, since I have never before been addicted to anything like the severity of attention that acquiring new and difficult languages demands. And yet, so far from that attention being attended with evil consequences, I have found of late that my health and strength were perhaps as great as they ever were during my life. The Lord be praised for this great and condescending manifestation of his goodness, in thus blessing me and encouraging me to hope, that notwithstanding my unfitness for the work of the ministry, as regards, especially, personal holiness, that yet he is leading me to this exalted occupation by every mark of his providence.

“But health and strength, and uninterrupted quiet are not the circumstances (with me at least) which bring me nearest to God. I have experienced much more comfort, happiness, and satisfaction in religion in times of danger, or trials, or sickness. Oh, that I could so live as not to need my Father’s chastening rod! The sacrament on Good Friday [1825], was a time of some comfort to me. My feelings were excited, and I think I had freedom from any reserve of my own will contrary to the will of God. To me, it was a full and convincing proof that those days which are set apart by our Church for commemorating the various important periods of our Saviour’s life, death, and resurrection, are exceeding profitable, provided they be employed as special means of grace and freed from superstition. The sacrament of last Christmas and this Good Friday have, to me, been seasons of greater near-

ness to God and longings after Christ than any others for some time previous ; and hence I judge the observance of these days to have a beneficial tendency.

Sabbath-day Evening, April 24.—After a day spent in the means of grace, in public ordinances, with scarcely a devotional feeling, I mourn over my insensibility, and lament my distance from God ! My soul cleaveth to the dust. Lord, quicken thou me ! Help me, O my Father, to come nigh unto thee. Discover to me the Lord Jesus as the way, and the truth, and the life, and as the medium of access unto thee. Help me to meditate on my deplorable deadness and insensibility, and give me to mourn over my sin until the promise of comfort be fulfilled unto me. Surely no one professing to know something of God was ever so low as I. Days pass over me without a heavenward desire ; or, if there be any desire, it is utter feebleness. Help me, O Lord, to use all means in my power, depending upon thee, for spiritual advancement. Help me to deny myself worldly enjoyments. Help me diligently to pursue my studies with an eye, in all, to spiritual knowledge. Oh, prepare me fully for the great work to which I aspire. Give me humility and singleness of heart. Save me from spiritual and carnal pride. Enable me to feel intense love for the souls of men, and to be willing to labour *when* and *where* thou mayest be pleased to appoint. Give me grace to commit myself entirely into thy hands—to submit myself unreservedly unto thee, and to forego my own pleasure in all things. Help me to receive the Lord Jesus with child-like heart, and to long for him above every other blessing—to seek

him with an earnestness above all other pursuits. Lord save me, bless me, direct me. Impress my mind with deepest gratitude to thee for all thy wondrous mercies to me, and thy wondrous forbearance with me. Oh, that I could feel myself humbled before thee, lowly, penitent, and of an obedient heart. Lord Jesus, thou canst do all things ; have mercy upon me ! Save me from these imperfections (gross abominable sins) in my waiting upon thee, O Lord, to which I am constantly addicted. Give me attentive, anxious waiting for thee—a teachable spirit. Have mercy upon me, even me, O Lord God ! Enable me, blessed Lord, in the ensuing week, if I am still spared by thee, to live on the principle of self-denial, much prayer, meditation, and personal humiliation. The Lord be with me, to bless and guide me, and further me daily in holiness and preparation for heaven, and for the work I may have to do on earth. Amen and amen !”

The next trace of Mr. Scoresby's proceedings, in which we have anything of public interest, is contained in the following letter from him to Mr. Hodgson, dated 9th July 1825 :—

“I am sure you will rejoice with me, and therefore I write to inform you that my day of anxious trial is just past. I have gone through my examination, through the merciful kindness of Almighty God, not only successfully, but honourably. I was in hopes the examination would have been earlier, that I might have written to you in time to solicit the prayers of yourself, and of your excel-

lent and much respected sisters, for the blessing of God upon my appointment to the responsible and honourable office to which I expect to-morrow to be ordained. Let me not, however, lose the benefit that I expected, and do sincerely desire, of your united remembrance of me at the throne of grace. Ask for me, my dear friend, that I may be found faithful in the service of my Lord and Master, that I may be ever laborious, simple-hearted, and, if it please God, successful in my calling—striving, without any selfishness as to worldly things, for the glory of the Lord and the advancement of the Redeemer's kingdom all the days of my life.

“I did not see you for some time before I left, otherwise I should have announced to you some hopes I had of being accepted. There are forty men to be ordained to-morrow—above one-half to priests' orders; many of them, I greatly fear, are not yet taught of God; and, unfortunately, this important qualification is not insisted upon as essential to their appointment.

“Again has the hand of God been graciously manifested in my behalf. Besides my admission, I have to mark with gratitude, that a resolution which the archbishop has just adopted, would have prevented all my plans at present, had I offered myself at all later, or had I not before obtained the favour of the archbishop. He now receives no one for orders, except graduates of the universities, who have not been resident two or three years in *his diocese*; and on this very ground he rejected one candidate this morning!”

On the 30th of July he wrote as follows to his friend, Mr. Rathbone :—

“On Sunday, the 17th, I commenced my ministerial labours at Bessingby, and with feelings which, by your letter, you can, I perceive, well understand. The embarrassment, however, was less than I expected. This was probably owing to the church being a very, very small one, the congregation of course few, and these almost entirely strangers to me. I experienced a sort of feeling that was quite novel ; towards the people a sincere love was felt, even before I knew them. It was sufficient to see them and to know they were of my little parish. I fancy my feelings were something of the nature of a mother to her infant offspring, because altogether independent of their personal characters or their feelings towards me. Sermonizing, I have found perfectly easy, as far as concerns a plain systematic discourse ; but to compose a *good* sermon, I found it much more difficult than I expected, and hence, what I have yet written are generally, if not wholly, as common-place as may be. If, however, I can obtain a sufficiently deep sense of the solemn and responsible nature of my office—with the prevailing influence of personal godliness, and the infinite value of immortal souls always before my eyes—my discourses will, at least, be edifying ; but as yet I have not succeeded as I could wish.

“The Quay* is a most agreeable residence. It juts out in the middle of a most beautiful bay, terminated on the

* Burlington Quay.

south by a low shore approaching the Spurn, but on the north by the bold white limestone cliffs of Flamborough Head. My little parish has a beautiful little village. The cottages are quite picturesque, the fronts being covered with honeysuckles, monthly roses, and jessamine. The neighbourhood is also pleasant, and affords some excellent society ; while a large number of gay persons flock to the quay as a summer's residence. Among these I find goodly society ; but time is needed to give confidence and esteem."

In a letter from the Rev. Thomas Cursham, of Mansfield, to Mr. Scoresby, inviting him to preach in his church, the following paragraph occurs, in which the sum mentioned strangely contrasts with that named by Mr. Scoresby as having been the average produce to him of a Greenland voyage, namely, £800 :—

"I hope you find your present residence agreeable. Surely some one possessed of the means (prelate, or no) will confer a credit on himself, and do you common justice, by making you more than passing rich with £40 a-year in the church. It is true that I ride about a thousand miles a-year for rather less than this sum ; but I have more than I deserve, and only want a grateful heart to the Giver."

Shortly afterwards, the charge of two additional, but very small, parishes was given to Mr. Scoresby. And here he delighted to dwell, "training himself," as he ex-

presses it, "to humility, simplicity, and submission to the divine will." Although much occupied in preparation for the Sabbath's preaching, Sunday-school teaching, and in visiting his widely scattered flock, he, nevertheless, found opportunity to write several interesting scientific papers, chiefly on magnetism, which were published in the "Edinburgh Philosophical Journal," and a long article on the Polar Regions for the "Edinburgh Encyclopædia." Thus the remainder of the year 1825 and the succeeding year passed away. At the close of the latter, however, his Liverpool friends, who had been earnest in their desire for his return amongst them, intimated to him a scheme which had been set afoot for establishing a floating chapel for the benefit of sailors; and, moreover, threw out a passing hint that it was an excellent opportunity for getting him back again. The following, from a letter, dated 27th November 1826, to Mr. Hodgson, expresses Mr. Scoresby's feelings with respect to it:—

"I have had letters from three different friends respecting the Floating Church, all of whom kindly wish me to be appointed to it. After the conversation I had with you on the subject, I did not think it necessary to make any application to the trustees respecting it,—supposing that if it were likely that the trustees should esteem me eligible for the responsible situation of clergyman to the Mariners' Church, some one would inform me of it. But just now, a friend tells me, that if I would not be shut out from all probability of the appointment, I must apply to the trustees. I acknowledge that there are some

things about the restrictions of the clergyman that I don't like. I believe it to be natural to Englishmen to like liberty, and I should have liked the Floating Church better if its clergyman had been as free as others, though, for my own part, I might never have desired to have taken advantage of that freedom. This circumstance, together with the hope and belief that God will direct both the trustees and myself in this important matter, has made me not *indifferent*, but *submissive* as to the appointment. In regard to myself, it has pleased God to make my way so clear hitherto,—yea, every step of my progress, and every act of preparation, and every encouragement, and every humiliation,—that I could no more shut my eyes against his merciful and special guidance, than I could against the glare of the meridian sun shining upon my closed eyelids! And I do still believe that his will will be done as regards this opening for the Floating Church. As, however, the offering of myself may be a part of the necessary means, both as to the possibility of appointment and the ascertaining of the will of God, I write now to you to request that you will do what is needful for placing me in the situation of a candidate, provided you think there is a fair and reasonable prospect of success. That is, should you, from your knowledge of the sentiments of the trustees, be aware that any other person has a decided preference, I should have no desire either of taxing your friendship or at all disturbing the prepossession by an unnecessary application. Or there may be any other cause which would render my application useless, and, if so, I should prefer

receiving your candid and friendly communication on the subject to any other measure.

“You will not suppose, however, I hope, by the manner in which I now speak, or have spoken, on the subject, that I feel indifferent to the success of the Floating Church, or to my own appointment to so vast a field of usefulness ; no, I trust and believe there are few persons who feel more anxiously than myself for the success of this noble cause, or would desire to enter with more heart and soul into it, if the way were made plain to the appointment. And thus far, I cannot but feel that there seems to be a drawing of me to that great object—my early habits of life, my intimate acquaintance with the sailor, with his habits of thought, prejudices, language, and prepossessions ; my admission into holy orders at such a season, and the approaching conclusion of the ordinary stay at the church of nomination,—all seem to me as so many links of a chain connecting me with the Mariners’ Church. But the determination of the trustees will remain either as a connecting link or for my separation from it altogether. By that determination, my way will, I trust, be made clear for me. As private friendship has nothing to do with the appointment to such a situation—which ought to rest entirely upon the capacity, piety, and aptitude of the applicant—I make no appeal to any of the other trustees, nor ask anything from you but what you see it right and proper to give. Private friendship might give a cast to the scale upon a balance, but it ought to do no more. An institution so important ought not to be influenced by private feelings.

"I trust, whoever is appointed to the Floating Church, that the trustees will, if possible, appoint one who has been a sailor ; and, besides myself, there is a very considerable number in the Establishment. All who intimately know sailors, are aware that there is an idiom, not only in their conversation, which is peculiar, forcible, and striking, but likewise in the ordering of their thoughts. Not that this would require sea-phrases so much, as nautical illustrations, than which, to a sailor, nothing could be so intelligible or expressive. Yet no landsman *can* attain the force of that illustration ; and, in proof of this, I would venture to say that no landsman can imitate a chapter of the 'Naval Sketch-book.' A simple illustration would expose him to a sailor's ears as certainly as the Ephraimites by their *Sibboleth*."

The year 1827 opened with happy auspices. On the 3d of January, a letter reached Mr. Scoresby announcing the distinguished honour which had been conferred upon him by the Institute of France, in electing him one of her "Corresponding Members." A week or two later, whilst engaged in delivering a course of scientific lectures at York, the intimation of his unanimous election to the office of chaplain to the Mariners' Church in Liverpool was made to him. Although the time appointed to be fulfilled in the church to which ministers are first nominated was not quite accomplished, the archbishop, nevertheless, on being satisfied that an efficient substitute had been obtained to undertake the intervening period, re-

lieved Mr. Scoresby from further duty at Bessingby ; so that he was enabled—all preliminaries necessary with the bishop of the diocese having been arranged—to commence his new duties in Liverpool on the 17th of May.

CHAPTER XIII.

MARINERS' CHURCH—RAMMOHUN BOY—DEATH OF MR. HUSKISSON—EXTRACTS FROM SERMONS—DEATH OF HIS FATHER—ORIGIN OF BRITISH ASSOCIATION—CAUSE OF HIS REMOVAL FROM LIVERPOOL—BEDFORD CHAPEL, EXETER—TESTIMONIAL—EPIDEMIC OF CHOLERA, 1832—DEGREE OF B.D.—FREDERICK'S LETTERS, ILLNESS, AND DEATH—SCIENTIFIC PURSUITS—WILLIAM GOES TO EDINBURGH; HIS ILLNESS, AND DEATH—MR. SCORESBY RESUMES HIS SCIENTIFIC INVESTIGATIONS—SEVERN ACCIDENT—"ADMIRALTY COMPASS."

1837-1838.

CONCERNING his ministerial life in Liverpool, Mr. Scoresby has left his biographer but little to tell, having himself infused a considerable amount of personal narrative into the *Memorial* of his son.* The Mariners' Church consisted of a ship of war fitted up for the purpose, and capable of accommodating about a thousand persons. The services were usually attended by that class, in preponderance, for whose edification they were designed, though many of the inhabitants of the town might on all occasions be observed throughout the galleries, the body of the church being almost entirely occupied by sailors. Mr. Scoresby's pastoral visits were chiefly confined to the shipping in the extensive docks. "In order," he says, "to make myself acquainted, as far as circumstances allowed, with the numerous captains frequenting this port—both with a view, under the divine blessing, to

* *Memorial of F. R. H. Scoresby.* London: James Nisbet & Co. 1837.

the promotion of religion among them personally, and, through their instrumentality, among the sailors under their command—it was a rule with me to visit the docks, at a stated time, weekly.” He was also, however, frequently drawn into the town to visit such of his congregation as resided there, of which visits several most encouraging examples are recorded in the *Memorial*. In the same work there is an interesting account of the arrival of Rammohun Roy in England, with whom Mr. Scoresby had several opportunities of conversing, and was highly gratified by the warmth of manner with which this celebrated Hindoo expressed his appreciation of the gospel; it was in the Floating Chapel that Rammohun Roy first attended divine worship in this country. The melancholy death of Mr. Huskisson is likewise recorded, Mr. Scoresby having witnessed the train of circumstances which gave rise to the fatal occurrence.

In his discourses* to the sailors, Mr Scoresby was in the habit of frequently employing familiar nautical illustrations, with the view of arresting the attention of such as would otherwise have carried little or nothing away with them for after meditation. Some of these are very striking; we select the following:—

* A volume of these was published in 1831 by Nisbet and Co., London. It consists of fifteen sermons, comprising the following subjects:—On the Love of God in Redemption—On Regeneration, or the New Birth—On the Power and Influence of Satan—On the Injurious Influence of the Conduct of Wicked Sailors—On the Beneficial Influence of the Conduct of Pious Seamen—On the Resurrection and Final Judgment—On the Duty and Importance of Immediate Repentance—On the Messiah—On the Finished Work of Christ—On the Christian Sabbath—On the Evils of Intemperance—On the Works and Wonders of the Lord in the Deep—and On the Practical Revelation of the Trinity.

THE IMPORTANCE OF REGENERATION.

“ In philosophy, or in art, we may hold ten thousand errors, and yet be neither less happy, nor less religious ; but so supremely important is the present subject, that one fundamental error here will be the ruin of the soul. A ship, as you well know, may have a thousand defects in her upper works without particularly endangering her safety, whilst one single defect below—a bad plank, or an open seam, or a started butt—may produce a leak that will be fatal. So, my brethren, whilst errors in opinion as to many of the matters of life, of morals, or even as to the minor points of religion are, comparatively, of little importance, one material error, in the matter of regeneration, will sink both body and soul in eternal perdition ! ”

“ We shall endeavour further to explain the nature of the new birth, by an illustration taken from a subject which is familiar to every sailor. I refer to the mariners’ compass. Whilst you are all acquainted with the compass, most of you, it is presumed, know something of its construction ; and every one, who has ever been at sea, must be aware of its usefulness. It is your guide, and means of safety and prosperity. Now, what the compass is to the sailor, the Spirit of Christ (which entering the heart produces the new birth) is to the believing Christian. The former guides through the trackless deep, when neither sun nor stars are visible, and enables you to reach the port to which you are bound ; the latter guides through the mazes, darkness, and manifold perils of this

mortal life, to the haven of eternal bliss. But consider what the compass would be *without being touched*. It might have all the apparatus and requisites of a compass,—it might resemble other compasses so much as to present no difference in its external appearance whatever, and yet, for any purpose of navigation, it would be entirely useless. And such precisely is the natural man, before his heart is touched by the Spirit. He is a soul without divine life—a compass without magnetism. He may, indeed, exhibit all the outward appearances of the spiritual man; he may sustain a moral character; he may be diligent in religious duties; he may be forward in good works,—yet if he have not the divine touch—the heaven born love, or charity—he is nothing. As the untouched compass has no attraction to the pole—stands in any direction—is inactive, inanimate, useless—so the unregenerate man has no attraction to Christ, the believer's pole-star; he is indifferent to heavenly influences; more readily stands out of the right direction than in it; and is, in short, sluggish, dead, and unprofitable. As, therefore, the compass, however well made and beautifully finished, must be touched with the mysterious influence of the magnet, before it can turn to the pole, so the heart must be touched with the secret influence of Christ's Spirit, before it can turn to Christ.

“But if any still doubt, like Nicodemus, because of the *mystery* of regeneration, and again and again say, ‘How can these things be?’ we would refer you, after the manner of our Lord, to the mystery of the magnet, and ask you to explain that. Tell us how the power enters

—whence it comes—how it acts? No! you cannot; yet you will not deny the power. Neither, then, deny the mysterious power which we have been describing, though we cannot explain the mystery. It is a mystery no greater than that of the magnet or of the wind. For—‘the wind bloweth where it listeth, and thou hearest the sound thereof, but canst not tell whence it cometh, and whither it goeth. So is every one that is born of the Spirit.’ If, then, the wind be a mystery which we cannot understand, it is but another mystery to be born again. If the compass be a mystery we cannot fully explain, the heavenly influence of regeneration is but another inexplicable mystery. As you believe the natural mysteries, why receive not the spiritual?”

CHRIST THE LIFE-BOAT OF THE SOUL.

“My seafaring brethren! let me reason with you on the folly of delaying religion. Let me endeavour to impress you with the danger of rejecting *now* the salvation of the gospel. The approach of death may be compared to the stranding of a ship on a lee-shore, in which the men who escape represent the righteous, and those who are lost the impenitent. Let us amplify this figure for present edification. Suppose, now, you were all in a ship which had struck on a sand bank at a distance from the shore to leeward. Imagine a frightful extent of roaring breakers between you and the land, and nothing but destruction staring you in the face. Suppose, whilst in this terrible condition, when all hope of escape was given up, that a *life-boat* should bravely push off and approach

the straining, parting wreck to which you clung. What joy would the sight of the boat inspire ; what hope and animation would be felt ! Imagine now the boat when within hail ; and being as near as safety will admit, the commander cries out, ‘ Now is the proper time—now is the moment for being saved ! ’ Would any hesitate whether they should then jump in ? Would any answer, ‘ Come again after a little while, and perhaps it will be smoother ? ’ Would any one, in his senses, say, ‘ I cannot come *now* ; but I will try to-morrow ? ’ How strange, then, that we should be so wise for this life, and such fools as to the next ! Yet such is the sinner’s folly who refuses the salvation that is offered him *now*, supposing he may have it to-morrow ! To-morrow ! Before to-morrow’s dawn, O hesitating sinner, thy poor fragile, crazy hulk may be broken up, and thy ill-prepared spirit may have been called to meet its God.”

THE VOYAGE THROUGH LIFE.

“ For the Church of Christ may be compared to a ship ; the world to a sea ; temptations and persecutions, afflictions and dangers to the waves of it ; Satan, the prince of the power of the air, may be likened to the stormy wind that raiseth the waves ; and heaven to that desired port where is eternal security and blessedness.

“ Brethren, as you are all embarked in this dangerous voyage, and as all of you, in a greater or less degree, have encountered its alarming storms,—let me now inquire, whether the dangers you have experienced have made you cry unto the Lord to bring you to the heavenly

haven? Whether every storm has directed your thoughts to Him that raiseth it? Whether every deliverance has called forth your gratitude to Him who regarded you in your distress? Let me solemnly ask you, whether these exhibitions of peril and mercy have had their proper influence in determining your choice as to the course you shall steer, with the blessing of God, for the rest of your lives? Whether you have both begun to pursue the right way and are now pursuing it? In plain language, I ask, is your head towards heaven or hell? But I shall assist you in determining. If you are drifting before the wind and tide of your sinful passions; if you are trusting unskilful nature at the helm;—be assured your course is towards destruction! But if you are striving against the lee current of your lusts; if you are beating hard against the foul breeze of Satan; if the word of God be your chart and sailing directions; if the Holy Spirit be the magnetic influence by which you steer, and Christ the skilful pilot on whom you rely for the success of your voyage;—then would I say, be of good cheer—‘be strong and of a good courage; be not afraid, neither be thou dismayed, for the Lord thy God is with thee whithersoever thou goest.’ ”

THE HOLY SPIRIT THE MOTIVE POWER.

“For as a *sailing vessel*, however beautifully constructed, however well its masts may be proportioned, and its sails spread, cannot advance on its voyage without the propitious breeze of heaven, neither can all the machinery designed for human redemption—beautiful,

powerful, costly, and perfect as it is—be able to carry a single soul on its voyage to heaven, without the fair and influential breezes of the Holy Spirit.” . . .

“Brethren, the spiritually wise, in their voyage towards an eternal world, improve the present fair breeze of the Spirit. To-morrow the foul blast of Satan’s opposition breeze may set in strong and unvarying against you! You have now the means of clearing the roadstead of destruction,—the wind blows fair. Let him that is wise, then, take advantage of the breeze to clear the land. For as one day’s loss of the favourable breeze which carried others safe to sea, may cause the ship that was detained to get embayed and wrecked, so one day’s loss of the auspicious gale of the Spirit may occasion the *shipwreck of the soul*! Men and brethren, delay not another day! Repent *now*, in the day of the Spirit! *Now*, when the Spirit moves among us! *Now*, when Christ Jesus is present in the midst of us! For, ‘behold, *now* is the accepted,’ the favourable time; behold, *now* is the day of salvation.”

REMEMBER THE SABBATH-DAY TO KEEP IT HOLY.

“Notwithstanding many of the foregoing remarks apply to the sea as well as the shore, yet I must speak more particularly about *the sanctifying of the Sabbath at sea*. Though there be no ‘sound of the church-going bell’ to call you to the duty of public prayer; though you have no sacred temple in which to present yourselves unto the Lord, and no consecrated priest to minister in holy things;—yet it is as much your duty to remember

the Sabbath at sea, and to endeavour to sanctify it, as it is to keep it holy on shore. And I must be free to tell you, that if you excuse yourselves, the Lord excuseth you not. He makes no exception for sailors. Does any one say that it is not possible to serve the Lord at sea? We cannot keep the Lord's-day holy? we cannot have divine worship on each returning Sabbath? Mistaken friends, allow me affectionately to say, *you can*. Duty to God says *you must*. If you cannot serve God at sea, you ought to stay on shore. For 'what shall it profit a man if he gain the whole world, and lose his own soul!' If your profession prevents your being good Christians, holy men, let me tell you it is a bad profession! If you cannot undertake the spiritual voyage at the same time you follow the sea, your calling must be most evil. But I thank God, for the sake of our many seamen, it is otherwise. Neither your occupation as sailors, nor the want of churches to which you may resort, nor the want of ministers to assist you in holy things, prevents you, necessarily, from leading a religious life. For the Lord, who restricts not his servants to approach him only in houses made with hands, can be worshipped where no such churches exist,—afar off at sea, even as on shore. Because, wherever two or three are gathered together in the name of Christ, there hath he promised to be in the midst; there is a church, and there ye may seek and expect a blessing. And as to opportunity, there is abundance if you would improve it; if you have the will, God will find the way. Gales, or dangers, or difficulties, though they occur in their usual course, will

seldom prevent your waiting upon God, if your hearts be interested in the important duty."

In the year 1829 Mr. Scoresby had to mourn the death of his father. The Scoresbys—father and son—left the sea about the same period—the latter, as we have seen, to enter upon a new field of labour; the former to enjoy that repose in advanced age to which the unremitting toils of his youth and prime fairly entitled him. He retired, in 1823, to Whitby, where he afterwards chiefly resided, occupying himself with healthful and useful employments. True to his maxim that "learning is never a burthen," he laboured to attain greater knowledge, which he was zealous in imparting to others, especially to children. The following extract from the last letter which we find to his son, describes his daily habits:—"I exercise myself daily in the fields, by endeavouring to destroy the noxious weeds,—get up fences in my little farm, so as to make an extra blade of grass grow. I also occasionally attend the Whitby and Ruswarp workhouses, endeavouring, so far as my feeble efforts go, to instruct the young children. I continue to advocate improvements in the town and harbour, particularly now that the work can be done so cheaply. By these and other exercises, aided by temperance in diet, I am, under Providence, become my own physician; and I have the privilege to state that my health (which was impaired by forty years of sea-service), continues to improve." He died a few months later, in his seventieth years.

One other incident which occurred during Mr. Scoresby's sojourn in Liverpool may be mentioned :—the origin of that association whereby—through a course of thirty years of uninterrupted prosperity, promoted by the zealous and indefatigable application of the talents and genius of its members—so great lustre has been added to our already exalted national reputation. The preliminary meeting of the BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE was held in the theatre of the Yorkshire Museum, at York, on the 27th of September 1831, at which Mr. Scoresby was elected to the *sub-committee for the section of Mathematical and Physical Science*,* and from that time to the year of his death he attended the meetings most regularly, seldom failing to contribute a paper, or to exhibit improvements in such philosophical instruments as his magnetical investigations rendered him familiar with.

Mr. Scoresby held the chaplaincy of the Mariners' Church for five years, during which his ministerial offices were attended with remarkable success, and he would in all probability have continued to labour amongst that class with whose habits he was so well acquainted, had not the circumstances we are about to relate rendered a change of climate imperative. In June 1828 he married Miss Elizabeth Fitzgerald, a lady distinguished for her amiability, benevolence, and piety, the eldest daughter of

* At this meeting he gave—"An Exposition of some of the Laws and Phenomena of Magnetic Induction, and of the Mutual Influences of Magnets on each other, with an account of a Method of Application of the Magnetic Influences for the determination of the thickness of solid substances not otherwise measurable."

Colonel Fitzgerald, who held considerable property at Corkbegg, in the south of Ireland. Soon after their arrival in Liverpool, Mrs. Scoresby's health began to fail, and it was discovered that a more southern residence was necessary for her. Mr. Scoresby, in the *Memorial* of his son, remarks :—

“The writer may briefly state, that his resignation of his post of so much importance in Liverpool, was occasioned simply by the unremitting sufferings of his beloved and devoted wife, from the incongeniality of the atmosphere, or climate, whilst resident there. She had only been a few months in Liverpool, when her ordinary health altogether gave way, and was only recruited, under the divine blessing, by a summer's residence in Ireland. On her return home, however, the same distressing result again took place, and subsequently also, after a second experiment, till it was felt to be no longer right to put the further trial of affection on so certainly painful an issue, so that for the last year of the author's chaplaincy of the Mariners' Church, she was altogether resident with her family in Ireland.

“Meanwhile an opening unexpectedly appeared, in the dispensation of Providence, for changing the writer's sphere of labour to a more genial part of the country, where, at Exeter, he had the great comfort and satisfaction of obtaining a residence for his family, in which the object of his solicitude was privileged to realize a considerable measure of enjoyment of health, and of other abounding mercies of heaven.

"Our removal from Liverpool took place in the spring of 1832. My wife being still resident in Ireland, and my eldest son, at the same time, being at Trinity College, Dublin, and our old and faithful servant having preceded us for the preparation of a home which had been engaged for us in Exeter, and for the reception of the contents of a little vessel, freighted with furniture, library, &c., Frederick and myself became the sole remnants of our family party, and fellow-travellers into Devonshire.

'The day after leaving Liverpool we had the happiness of joining my wife at Clifton, who, with a brother-in-law and family, had just arrived by steamer from Cork. On the 27th of April we proceeded to Exeter, and shortly afterwards took possession of our appointed residence there."

Bedford Chapel—to the incumbency of which Mr. Scoresby had been elected in competition with seventy-five candidates—was not completed on their arrival in Exeter, and was not opened for public worship until the 5th of August. In the meantime, the change of climate—aided by sea-bathing, which their proximity to the coast rendered feasible—had effected a marked amelioration in Mrs. Scoresby's health, whereby their regret at leaving Liverpool and its associations was greatly compensated. The appreciation of Mr. Scoresby by his Liverpool friends was testified in the presentation of a beautifully constructed clock. Dr. Traill, in behalf of the subscribers to the testimonial, says* :—

* In a letter which accompanied the testimonial to Exeter, April 1833.

"A few of your Liverpool friends, desirous of presenting you with some memorial of their esteem and attachment, have thought that, to one who justly appreciates and improves the fleeting moments, no present could be more appropriate than an instrument to measure time. They have, therefore, united to present you with a skeleton clock, made expressly for you by our best artist in that line, and I am desired to request your acceptance of this tribute of sincere and admiring friends."

He attended the meeting of the British Association, at Oxford, in the month of June, to which he contributed "An account of some extraordinary effects of lightning on the packet ship, *New York*." A few weeks later we find him visiting from house to house, amidst hundreds dying of cholera, a disease which had prostrated the population throughout the length and breadth of the land. Speaking of Exeter, he says : *—

"We are here suffering under a most severe exhibition of that awful scourge with which it has pleased God to visit our hitherto greatly privileged land. Our cases of cholera have been fifty daily, for above a week, with about one-third part of deaths—a quantity which has not been equalled, I believe, in the proportion of population, in Britain. I consider it as fully one-half of the proportion, if not more, which occurred in Paris! The means of a remedial nature, under God, are yet *very, very* imperfect. This is an independent city—an independent

* Letter to Mrs. Rathbone, 17th August, 1832.

corporation of the poor—an independent chapter,—none of them reached by the orders in council, and consequently no means of raising funds excepting by voluntary contributions. Being myself a member of the Board of Health and of two or three committees (for provision for the poor, for disinfection, &c.), I shall be glad of a few of those hints which, by your experience, you have gained. The best of my time since my appointment to the board has been spent there. I am thankful in being in any way useful. But much, very much is yet to be done, and great difficulties are in our way. Whilst, however, we feel the imperfection and difficulties attending human means, I have much comfort personally, felt also by the Christian population generally, in the appointment of next Wednesday as a day of general local humiliation and prayer to Almighty God for his mercy in this great visitation. He who bringeth the disease upon us, can alone remove it or mitigate its severity. It is a characteristic of the fearful disease that, in its early stages especially, in every place, it seems to mock all human efforts and human wisdom. As a French physician has lately said, other diseases *end* in death—this *begins* in death! You, however, are familiar with these solemn impressions which we have but recently begun to participate in.”

In 1834,* eight of the ten years of probation under

* At the meeting of the British Association in 1833, Mr Scoresby contributed a paper on “A Peculiar Source of Error in Experiments with the Dipping Needle.” He also published, in the same year, his “Memorials of the Sea;” also “The Believer’s Consolation,” a penitentiary sermon.

which Mr. Scoresby entered the University of Cambridge for the degree of D.D., having elapsed, he was called upon to keep his terms, and, accordingly, repaired thither in the beginning of the year and remained until the 11th of June, when, having complied with the prescribed rules, and after undergoing the necessary examinations, he received the degree of Bachelor in Divinity, from Queen's College.

His two sons, concerning whom but little has been mentioned, were both living from home—the one, William, being at Trinity College, Dublin, the other at a boarding-school a short distance from Exeter. Mr. Scoresby's great desire and aim in educating his children was to fit them for the ministry, to which honourable and highly privileged calling he endeavoured assiduously to turn their minds. William was active, energetic, and talented; but his inclinations had a different bent. He preferred the medical profession, and was at this time far advanced towards a degree in Arts at Dublin, which his father intended merely as a preparatory step to entering one of the English Universities.

Frederick, of whom we are now brought to speak more at length, was, in respect of physical development, the very opposite of his brother. He was a small, weakly, and backward child; slower in his learning only than in his growth in stature. Until this period, although nearly sixteen years of age, he had never been strong enough to trust away from home, and his separation now was made rather with a view of preparing him for college life than with any desire to urge his studies into

more rapid progress. But, though almost a dwarf in bodily dimensions, and possessed of no great mental powers for ordinary learning, in spiritual things he had attained unto *great* knowledge. From the moment when he first lisped his prayers, until the day of his—to human understanding—*premature* death, he seemed possessed of but one “thirsty interest,” a desire after the good things of which the Bible told him, and therefore he made that book his first friend. Of the numerous pleasing, even wonderful, incidents of his infancy and childhood, in connection with his strongly developed feelings of piety, it will be impossible even so much as to make mention. A few of such traits, however, as were evinced during the latter period of his life, may with propriety be dwelt upon. He was taken to the school, referred to above, by his father, on the 16th of October 1834.

“We arrived at the school,” says Mr. Scoresby, in his memorial of Frederick, “about one o’clock of the same day. Just as I had dismissed the carriage, in which we had crossed the line of road traversed by the daily coaches to B——, I was told—and my heart sank within me when I heard it—that a fever, of the typhoid kind, had recently prevailed in the school. It had previously, indeed, been intimated to us that several of the boys had been attacked by an epidemic; but, as the influenza, which I imagined this disease to be, had been almost everywhere prevalent, the intimation made no impression on my mind. The idea of a typhoid fever, however, gave me, on the first mention of it, great anxiety, though

subsequent information on the subject considerably allayed it. For, on inquiry as to particulars, I found that there was no case then in the school—that, among those which had occurred, none had been fatal—that the place had been thoroughly purified since the removal of the invalids, and that, previous to this visitation, the situation had always been considered as healthy. Hence, I doubted whether I should not be erring from timid apprehension and distrust of Providence, were I to take my anxious charge back with me. This consideration, moreover, had a decisive influence on my final determination, that the weather, which, for three months previously, had been hot and unusually dry, had now set in damp and very cold; so that I inferred that the state of atmosphere, which appeared to have predisposed for the disease, having passed away, the habit of body, adapted for receiving the contagion, was not likely to be produced in one not having previously participated in the malaria of the locality. But the hopes derived from this consideration, however well founded in the theory of disease, were painfully disappointed, as the sad, sad issue too soon testified.”

In his first letter, dated “B——, October 27th, 1834,” amidst other things, Frederick says:—

“Last Friday night I did a Latin theme for the first time in my life. I gave it up on Saturday morning, and have not heard anything about it since. The subject was, ‘What cannot be cured must be endured,’ which I

thought very applicable to my present feelings; for, even to this moment, I have not got over my loneliness, and in some cases my feelings quite overcome me. . . . Give my best love to dear mamma, and tell her that I do not forget to pray for her and you. It seems like an age since I left home. Please to send me some advice and comfort; and I have prayed to God to put into your's and mamma's heart, *such advice as may do me good, and also to enable me to follow it.* I passed a very quiet Sunday yesterday, indeed, quite as quiet as ever I did; for I was able to stay by myself in the playground, and think about you and mamma, and to pray silently for different things. Do you think," he anxiously asks, "I denied Christ when I did not say my prayers in the *bed-room*, because the other boys did not, and lest they should laugh at me? though I said them afterwards by myself in the play-ground." In his next letter he says: "I have been a good deal more knocked about than when I first wrote to you. I have tried to bear it as well as I could, though, in one instance, my feelings overcame me. I begin to feel more used to my situation, though I cannot help feeling lonely sometimes. I passed a very pleasant birth-day (5th of November), especially in the evening; for most of the boys had gone out to spend the afternoon at those houses where they were invited. I hope that you and papa continue well, for I do not forget to pray for you both, as I know that you pray for me. I am much obliged to you for your kind letter. *I have not left off saying my prayers since I wrote to you.*"

In a letter to his mamma, of 3rd of December, he says :—

“ I know you wish me to tell you candidly what my feelings are towards you. I am sorry to say that sometimes I have felt an indifference towards you, and I tried to drive it from me, by thinking of your kindness to me, and my ungratefulness to you ; but, when your letter arrived, my indifference went away. Even now, while I am writing to you, I fancy I feel indifferent, though I am trying to drive it away. I prayed against it last night, and mean to do in future, for I did not think of it before.”

In another letter, written a little later, in which he expresses his apprehension of being guilty of the sin of lying, he says:—

“ The boys are now writing out songs to sing at the end of the half-year, and, on Sunday night last, some of them came to me, and began questioning me about what songs I knew ; and then they asked me if I would learn one if they would teach me ; and I consented on condition they would let me see what it was about first, ‘ for,’ said I, ‘ I have felt the consequences once before of making a rash promise.’ They then give me three to choose out of ; but I was afraid that there was something indecent in them, and I tried to persuade them to let me see them first ; but they would not. They then offered me two of them, and gave their opinion as to which I should

choose ; but I, thinking the one which they said was the best to be the worst, foolishly chose the other one with reluctance. But when they had made me repeat the first verse, I found that it was indecent : even then I thought that I would just see what the second verse was, and found it worse than the first ; I said I would not go on any further. ‘Then,’ said they, ‘you will tell a lie, for you promised to learn it.’ At that moment I thought of Herod’s rash oath, and your [to his papa] saying ‘that it would have been better for him to have broken his oath, than to have beheaded John ;’ and I said, ‘that there was a choice of evils, and I chose to break my promise !’ But I got three good licks of the arm ; for it is a custom among the boys to give three licks for a lie.”

Again, in a subsequent letter, he says :—

“About a day or two after I wrote to you last, the boys began to ask if I thought it was wrong to hunt squirrels ? for they had been doing so when we went out to walk. I said, ‘Yes, as it was only for amusement.’ Then they asked me if it was wrong to hunt whales ? and I said, ‘No ! because there was an object in it.’”

He wrote but one more letter, which, being the usual formal half-yearly epistle, written under the inspection of the master, contained nothing of interest. He was seized with illness a day or two before his anticipated journey home, and was consequently detained after the other boys had separated to enjoy their Christmas holidays. In

communicating the intelligence of his indisposition to his parents, no great stress was laid upon the probable danger attending it. Mr Scoresby, therefore, being very much occupied, did not think it necessary to go himself to B——; but, when it was deemed prudent for Frederick to travel, a trusty servant was sent to escort him home.

“He appeared not more worn down by the disease,” says the Memorial, “than we had anticipated; but his countenance was heavy, his voice unusually drawling, and his hearing scarcely impressible except by a man’s voice. He was evidently ill—though, under the very careful attendance of the servant, he had performed the journey pretty well; and I could not but feel, notwithstanding the favourable reports we had received of his case from B——, very anxious about him. He spoke little or nothing, except in answer to any questions; and he returned but a feeble and imperfect response to the endearments with which he was received. We gave him some tea, and then, supported by my arm put round him, he walked up stairs to his bed-room,—from which, dear lamented child! he was never to walk again.”

He grew gradually worse from day to day, and but little encouragement to hope that he would be spared was given by his medical attendants. Many delightful evidences of the grace of Christ working in his heart were manifested during this fatal illness; the following communication was made to his papa on the morning of the 23rd of December.

"It was on this morning, if I mistake not, on my going to his bedside, after my breakfast, and sitting down on a chair by him, that he gave me a singular statement concerning a presentiment he felt of a *fatal* result from the disease under which he was prostrated. His communication was to this effect: 'Papa,' he said—the usual commencement of observations resulting from some previous mental process, 'I read in the ——,' (mentioning the title of a book which I do not distinctly remember)—'a warning from the text that "*This night* shall thy soul be required of thee;" and further on, I read, "*This year* thy soul may be required of thee;" and, when I looked into my text book, I found that the text for the last day of the year was, "What is your life? It is even a vapour, that appeareth for a little time, and then vanisheth away!" I thought,' he added, with an anxious smile and agitated expression, whilst his cheeks coloured under the influence of the emotion,—'I thought that it all applied to me!' The expression of his countenance, and earnestness of his manner, together excited an involuntary shuddering and anxious sympathy. I could only encourage him with this assurance, 'That he was in his heavenly Father's hands, who ordereth all things well, and that He would do what was best for him!'"

"On visiting his room on the morning of the 25th, I reminded him that it was *Christmas Day*, of which he said, he was not aware; and he smiled in affectionate gratitude when I wished him a happy Christmas and Christ's blessing. When we returned to his chamber, after the morning service in the church, he said, 'I have

been wondering that you should administer the sacrament on Christmas Day,' I asked him, 'Why?' 'Because,' he answered, 'Christmas Day is a day of *rejoicing* in the birth of Christ, and the sacrament is in remembrance of his death!' I explained to him that 'notwithstanding this *apparent* incongruity, it was still most suitable, inasmuch as, by the *death* of Christ, it is, that we, sinners, are enabled to rejoice at his birth; and that those only who, by faith, obtain an interest in his death, can really rejoice in the birth of a Saviour!'"

"The next day, 28th of December, was Sunday. I told him that it was the 'Lord's day,' which he had not previously remembered. He appeared more animated in his countenance than usual, smiled as I approached him, and kissed my hand. After breakfast, his mamma suggested that I should ask him whether he would not like to have the benefit of the prayers of the congregation! He coloured at the question, and answered, 'Yes!' but expressed a desire that his name should not be mentioned. We then proposed that the prayers should be requested 'for a sick child.' To this he seemed to assent; but, after a considerable time, during which he seemed to have been meditating on the subject, he said to me, 'Papa, say, for a sick boy!'"

"At this crisis, under feelings of intense anxiety, I was obliged to leave the dear child, having no one to take my place at the evening service of my church. It was Innocents' Day. My subject, prepared for this special occasion, was founded on the text, 'A voice was heard in Ramah lamentation and bitter weeping: Rachel weep-

ing for her children, refused to be comforted for her children, because they were not.' The melancholy appropriation I painfully anticipated ; but, notwithstanding much oppression and distress of feeling, I was mercifully assisted, so as to be enabled to go through the trying service. . . .

" After they [the physicians] had left the room, the dear child asked me whether the doctors said he was better or worse. I told him that 'they thought him very unwell ; but,' I immediately added, writing on the slate [his illness had made him quite deaf], 'you believe in Jesus Christ ?' He signified his assent. I then wrote, 'He that believeth shall be saved.' Of this he signified his belief. 'Do you feel the Lord comforting you ?' I next asked. He paused, and then replied, 'I am not quite certain.' 'But,' I added, 'I believe you are God's child.' No sooner had he read this remark than his countenance became lifted up, as it were, with a bright beam of hope ; and under the momentary animation, he put forth his trembling arm, and, taking my hand, drew it to his lips, and kissed it. The act and expression were indescribably touching. . . .

" On one occasion, during the height of the spasm, as I was sitting by the side of his bed, he put forth his withered and trembling arm, and, taking my hand, resting on the bed beside him, drew it towards him, and, with an affecting expression of endearment, whilst hopelessly soliciting comfort, enfolded his little hand within mine. But there was no help in man ; nature at such a moment could but weep.

"I sat up with him on the night of the 30th-31st, till three o'clock in the morning, ministering to him as usual his hourly spoonful of nourishment, and from time to time, according to the directions, his medicinal potion.

"About three o'clock, as the dear child had become easier than for some hours previously he had been, had then longer intervals of quiet, and seemed disposed to sleep, I left him in charge of the nurse, along with an attentive female servant. Our medical friend, who was sleeping in an adjoining room, had left orders to be called on any emergency; and I requested that I also should be called in the event of any change. No such change, however, was at the time apprehended, I believe, by any one. His case, indeed, I considered all but hopeless; and I had been enabled, during my recent watching over him, to surrender the child of my affections into the hands of HIM who had given him. But I had no idea that the termination of my hopes and of his sufferings were so near.

"He continued, after I left him, to receive his hourly portion of nourishment up to six o'clock. Previously he had taken whatever was put to his lips; now, however, after one dessert-spoonful had been swallowed, he declined the rest, distinctly saying, 'No more.'

"At this time his nurse first observed a change in his appearance, and quietly called his medical attendant. I myself, harassed with anxiety, also awoke,—the thought painfully recurring to me, 'This is the day, the last day of the year, the text of which my poor boy thought applied to himself.' But the adjoining room was quieted;

the patient seemed easier; might I yet hope? Alas! no. A servant came to our door; we looked up in anxiety. It was to announce that 'there was a great change, and Mr. De la G—— had requested us to be called.' Hope was at an end, and we entered the chamber of the beloved child. The eyes had become dim, the countenance had sunk; there was yet motion of the lips, but the fearful aspect was only that of death.

"We fell down on our knees by the side of the bed—myself and wife, with two of the servants, and others—and just at the very moment, I believe, that we cried, 'Lord Jesus, receive his spirit!' he ceased to breathe, and his liberated soul was received by waiting angels, and winged away into glory. And so the question, 'What is your life?' was solemnly answered. It was found to be 'even as a vapour, that appeareth for a little time, and then vanisheth away.'

"One expression of sympathy and affection, peculiarly grateful to the feelings of the author," Mr. Scoresby remarks in conclusion, "arose out of the dispensation of Providence thus recorded. Some of the younger members of the congregation of Bedford Chapel, it appears, had observed the lamented youth at their public catechetical exercises, and had noticed his having occasionally united with them in answering the questions of their minister. This circumstance seems to have induced a kindly feeling towards him, and to have given rise to the proposition among themselves of perpetuating his memory by an appropriate cenotaph. And this was accomplished, in a manner equally creditable to themselves and suitable

for the object, by the erection of a marble tablet in Bedford chapel, bearing this inscription :—

SACRED TO THE MEMORY OF

FREDERICK RICHARD HOLLOWAY SCORESBY,

SON OF THE REV. W. SCORESBY, B.D., MINISTER OF THIS CHAPEL,

WHO,

DISTINGUISHED FOR SIMPLICITY OF FAITH, AND DUTIFULNESS OF CONDUCT,

FELL ASLEEP IN JESUS,

DECEMBER 21st, 1834, AGED 18 YEARS;

HIS REMAINS ARE INTERRED IN A VAULT AT ST. MARY'S CHURCH.

THIS TABLET,

AS A GRATEFUL AND AFFECTIONATE TESTIMONY TO THEIR PASTOR,

FOR HIS UNREMITTING EXERTIONS TO PROMOTE THEIR BEST INTERESTS

WAS ERECTED BY

THE YOUNGER MEMBERS OF HIS CONGREGATION.

What is your life? It is even as a vapour, that appeareth
for a little time, and then vanisheth away.

Deeply as Mr. Scoresby was afflicted by the loss of his son, he, nevertheless, felt it his duty to be "up and doing;" and in addition to his pastoral duties, was employed in many works of general as well as scientific utility. In 1835 he held a long correspondence with the French Foreign Office, who sought his advice in fitting out an expedition for the Arctic Regions. He likewise delivered an inaugural lecture in Exeter *Athenæum* touching the beneficial tendency of scientific pursuits, and the great advantages of promoting the acquirement of know-

ledge by public experimental lectures; and to these he added his ardent exertions in behalf of various charitable institutions, such as houses of refuge, and the like. But perhaps the most arduous undertaking of this season was his plea* on behalf of the distressed Irish Protestants, his zeal for whom, overwhelming him as it did in a numerous and lengthy correspondence, so far reduced his strength that he was compelled to retire for a time to Cheltenham, whence, in a letter to his son, dated 17th February 1836, he wrote as follows:—

“I have come over here on account of my health. Through mercy, both your mamma and myself have, I hope, received benefit. But I yet am far from being strong or well. The most painful effect of this indisposition is the manner in which it abridges my capability of labouring for the kingdom of God. I trust that is my great desire—to spend and be spent in the service of Christ. And this is, or ought to be, the feeling of every one who has a sound hope of being saved by Him. For if we are not our own, but bought with a price by him, our duty must be ‘to glorify him in our bodies and in our spirits which are his.’”

His health was restored by this interval of repose, and

* In a small published work he demonstrated from facts the following proposition: “That the sufferings and persecutions of the Protestants in Ireland are not owing to the aversion of the people to a Church Establishment, but are the specific results of the hatred of the Church of Rome to Protestant principles, and evidence of the efforts of the Church of Rome for the extirpating of Protestantism.”

we find him again at his post in the meeting of the British Association which was held at Bristol in the month of August. To this meeting he contributed a paper,* and exhibited an instrument, invented by himself in the year 1820, which he named a *magnetimeter*. He likewise had the honour of preaching before the Association, at whose request the sermon was published, under the title of "The Philosophy of the Gospel in Relation to the Three States of Man: What he was originally, what he now is, and what he is required to be." In November he delivered a course of lectures to the members of Exeter Athenæum, on *Astronomy*.

The year 1837 was passed in the same laborious manner. In March he communicated a paper on Magnetism to the Institute of France, which was read to the members by M. Arago, the Astronomer Royal. He was also engaged in a series of protracted experiments upon various kinds of plates and bars of steel, with a view to the determination of the different degrees of *permanence* of the magnetic influence induced in them with reference to the *temper* of the material acted upon. His ministerial functions, however, were not impeded by these scientific pursuits. He still continued his daily round of pastoral visits, and fulfilled his mission with unabated zeal.

The close of this year brought with it a new trial, in which he was called upon to resign his only remaining child to Him who giveth and taketh away—who doeth all things as seemeth him good.

* "On a New Compass Bar, with Illustrations by means of a recent Instrument, of the Susceptibility of Iron for the Magnetic Condition."

William, it will be remembered, had previously studied in Dublin, originally with a view of preparing for the ministry; but latterly, with his father's consent, he turned his attention to the study of medicine. Before quitting Trinity College he graduated in Arts, in a manner alike gratifying to his parents and creditable to himself. This took place in the spring of 1836. One year of medical study was subsequently spent in Dublin, after which it was his intention to have completed his education in the University of Edinburgh, and for this purpose he proceeded thither in October 1837. Before leaving Exeter, he one day said, "I wish I were in Edinburgh, for I feel as if I were going to have a fever;" and it was only on his own assurance that the sensation had passed away that he was permitted to undertake the journey. He went by way of Liverpool, whence he experienced a very rough voyage to Glasgow.

"I had a very severe passage from Liverpool to Glasgow. I never saw it blow harder than it did on our leaving port. I left Liverpool on Tuesday at one o'clock. During the night the sea broke through the dead-light of my cabin, where there were four berths, and flooded the whole place, soaking my bags, hat-box, bed, &c. I was not quite so sick as I expected; but it was a fearful night."

By this exposure he caught a severe cold, and "almost lost his voice." Through the kindness of Professor Traill's family, he was made very comfortable on his

arrival in Edinburgh, and soon took up his abode in respectable lodgings. When the winter session commenced, he applied himself with the utmost diligence to his studies, his scheme of which he described in a letter to his father as follows:—

“I am now regularly afloat, and working hard, which I hope, with God’s help, to persevere in. My daily routine is as follows: From nine till ten, a class on *Materia Medica*; from ten till eleven, a class on surgery (Sir Charles Bell); from eleven till twelve vacant; from twelve till one, the hospital; from two till three, the dispensary, where I pound medicines, make up prescriptions and the articles of the *Materia Medica*, bleed, and so on. There also, twice a week, the surgeon and superintendent apothecary hold an examination on the articles of the *Materia Medica* and pharmacy. From four till half-past five, dinner, &c.; from half-past five till seven, at hospital copying cases from the clerks’ books, which I have access to. The rest of the evening, tea, reading, &c. There are, or will be, weekly examinations at all the classes, except one, which the pupils may or may not attend; I have entered my name for all. I find taking notes at the lectures useful. I breakfast at eight, and hitherto have got an hour and a half’s reading before it. . . . One of Dr. Graham’s wards to which I have attached myself is a fever ward—the practice in which I see a great deal of.”

The scheme was too comprehensive; his constitution

was not equal to the excitement and harass of his new mode of life, as the fatal issue so soon determined. A kind letter from Professor Traill prepared Dr. Scoresby, in a measure, for the awful tidings which were soon to be communicated. It told of William having been attacked with fever, of the care which was being bestowed upon him, of the attendance of Professor Alison associated with his own, of the critical condition of the patient, and, finally, that William had expressed a desire to see his father.

"A peculiar conflict of feeling was excited by this letter," Dr. Scoresby afterwards wrote,—“fear and hope—*anxiety and perplexity perpetually alternating or mingling together.* Had the distance to Edinburgh been but a single day's journey, I should most probably have started by the very first conveyance; but where a distance of nearly 500 miles intervened, requiring two or three days' and nights' travelling, some consideration was necessary and suitable as to what was wisest and best for *me* to do, as it affected only my own feelings, not the dear boy's safety; for I had the most perfect assurance that every possible means of usefulness and comfort would be adopted which the highest medical talent and the kindest and most considerate affection could suggest.”

Having made necessary preparations for a journey to Edinburgh, he determined to abide the issue of the next mail; but to be in greater readiness he went with his baggage to the post-office, and there awaited its arrival.

Strange to say, the Edinburgh bag was *missing*, having, by an almost unprecedented error, been put into the wrong mail. A new dilemma now presented itself. To commence the journey in such uncertainty was most trying, and yet to remain was but to increase his anxiety. He determined, however, to await the next mail. The following evening he repaired to the post-office, as before, in readiness for immediate departure. The postmaster kindly made a hasty examination of the letters, and handed one to Dr. Scoresby. In his own words:—

“It was a moment of most *intense* anxiety. A little light from a neighbouring lamp enabled me to see the letter. I thought the seal was *red*—then I doubted; I ran nearer the lamp—it was *black*! Hastening into the Athenæum, I tore open the letter; the fatal intelligence was discovered at a glance, and I could only cry, ‘My poor boy!—my poor boy!’”

The letter was from Professor Traill. He told, in terms of tender sympathy and affection, of William's death. Of his last hours it remarked, “So young, so suddenly summoned—his conduct was what became a Christian, full of hope and confidence in the mercy of his Redeemer.” He died on the 13th of December, 1837, in his twenty-sixth year, and his remains were deposited in the burying-ground of St. Cuthbert's Church, Edinburgh, where they await the second coming of that Saviour in whose peace he passed away.

"A heavy cloud," Dr. Scoresby wrote, "seeming to hang over us, we tried change of scene for a little time, and went to the sea-coast to a place where, being little known, we might have an uninterrupted quiet. But though the Lord mercifully vouchsafed to us great resignation, quietness of feeling, and peace, yet the cloud accompanied us there."

A few weeks of repose served to recruit his health and to bring him back again to his duties. He recommenced with a paper on Magnetism to the Institute of France, which was communicated as before through M. Arago. In March he was again prostrated by a severe injury, of which he wrote to Mrs. Clark, on the 18th of June, 1838:—

"I am sorry," he says, "to have left your kind and truly affectionate letter so long unanswered; but various circumstances have rendered more writing than is absolutely necessary undesirable. In regard to the hurt in my knee, I cannot report so favourably as I could desire. My horse (Rosa) fell with me about three months ago, and I was thrown forward about ten or twelve feet on the road upon my head and knee. My hat, mercifully, protected my head, so that it escaped with a cut and rubbing off of the skin; and the knee did not seem to be materially hurt. But it has not recovered, so that I cannot walk except about the house, or a very short distance, such as 100 yards. Yet I am enabled partly to get through my duty in church, sitting on a stool."

Again, towards the close of the year, he resumed his active habits, and was engaged in a correspondence with a committee then sitting in London for the purpose of considering certain proposed improvements in the Admiralty compasses. He constructed several instruments for the use of the committee, and visited London occasionally himself in order to be present at their meetings.

CHAPTER XIV.

DEGREE OF D.D.—PLEA FOR THE UNITY OF THE CHURCH—REMOVAL TO BRADFORD—"DEFICIENCIES" AND "DIFFICULTIES"—THREATENING LETTER—"PLAN" SUBMITTED TO AND APPROVED BY THE BISHOP OF RIPON—QUESTION OF FEES—DISTURBED STATE OF THE MANUFACTURING DISTRICTS—ENCOUNTER WITH DISAFFECTED OPERATIVES—VISIT TO AMERICA—THE FACTORY OPERATIVES OF LOWELL—LORD ROSSE'S TELESCOPE—RESIGNS THE VICARAGE OF BRADFORD—SERIOUS ILLNESS—FACTORY GIRLS' FIRST SOCIAL GATHERING—TESTIMONIALS.

1839-1847.

THE year 1839 was an eventful one in Mr. Scoresby's life. The period of probation prescribed by the University of Cambridge having expired, he was now entitled to be admitted to his final examination for the degree of Doctor in Divinity ; and this he underwent in the month of May.

Hitherto, although frequently tried beyond the endurance of human strength in his manifold occupations, his ministerial charge had been so far circumscribed as to enable him to grasp its utmost limits with efficiency and ease ; whilst, at the same time, he had enjoyed a freedom from secularizing influences which left him at liberty to exercise the full power of his ministrations to the advancement of the Redeemer's kingdom. Though a staunch supporter of the Establishment, he was eminently catholic in spirit, associating frankly with all classes in the cause of the Great Head of the Church ; for, "the Church," he said, "by whatever variety of names distinguished, is one

body. Like other bodies, it hath many members, possessing different offices, and contributing, in their several relations, to the beauty and perfection of the whole. Yet their creative origin—their vital principle—their maintaining power—their spiritual organization—their eternal destiny, are the same. For widely as the various denominations may appear to differ, there is, essentially, but ‘one body and one Spirit, one Lord, one faith, one baptism, one God and Father of all.’” He strongly urged the necessity for unity in the Church, and especially deprecated divisions arising out of non-essentials; but whilst he asserted the pre-eminence of the Established Church, he candidly admitted her faults, for, he observes,* “that there are causes for objection, and that there is abundant room for improvement, in this venerable and distinguished institution, it would be vain to deny; but were defects a warranty for annihilation, who or what on earth could exist.” And although during the six subsequent years he was called upon to endure great suffering—almost persecution—in defence of her laws, yet he

* Plea for the Unity of the Church. London: Nisbet & Co. 1833.—This work consisted of a course of lectures delivered in *Bedford Chapel* during the winter of 1832-33, and published at the request of a large circle of admiring friends. It comprises the following subjects:—*On the Unhappy Divisions in the Christian Church*, arising from partial views of Scripture—from an absorbing or excessive attention to Prophecy, and the Second Advent of our Lord—from a very prevalent Antinomianism—from views of religion influenced by natural constitution: *On Particular Sources of Disunion in the Holy Church Universal*, from an undue consideration of the defects of the Established Church—from a natural fondness for new and particular doctrines—and from the endless sub-divisions by varieties of dissent: *On Prevalent Enthusiasm, or Errors of Religious Zeal*—in a belief in present miracles and tongues—in a fondness for religious excitement: *On the Nature and Extent of Christian Charity, with the Duty of Cultivating it*—limits of Christian unity—deceptive character, and pernicious effects, of the popular liberalism.

was graciously sustained throughout; and in the end, without the slightest compromise of principle, his righteousness was made to appear. To enter at length into the distressing details of the circumstances which caused Dr. Scoresby so much discomfort and unhappiness during his ministry in Bradford would neither be useful nor edifying; nor would the limits of this work permit a lengthy diversion into the ecclesiastical working of the parish. In a rapid sketch of his sojourn there, then, we must confine ourselves to the mention of a few salient facts.

Whilst in the enjoyment of a benefice of a most desirable nature, Dr. Scoresby was invited, by the trustees of the late Rev. Charles Simeon, to accept the vacant office of Vicar of Bradford. Many reasons combined to render a change of residence very inexpedient: the climate of Exeter was unexceptionable, and had been especially beneficial to Mrs. Scoresby; the congregation* of Bedford Chapel was solicitous for his continuance there, and he, on his part, was by no means desirous of separating from his flock, betwixt whom and himself a near and tender friendship had arisen; in these circumstances the offer was declined. But upon a second and more urgent solicitation, he accepted the living—believing it to be his duty to go, as he said, “where, under God’s blessing, there seemed to be a *noble field for Christian enterprise*”—and, accordingly, he was installed on the 17th of July 1839. Scarcely was he instituted in his new office when

* A handsome silver salver, together with a silver inkstand and copy of Coverdale’s Bible, was presented to Dr. Scoresby by the members of his congregation before he left Exeter.

he began to observe, with some dismay, the “formidable *deficiencies* and *difficulties* which would require to be promptly met, in order to the attainment or preservation of an effective system of clerical superintendence.”

“The *deficiencies*,” he says,* “consisted in the inadequacy of church accommodation, in the number of the clergy, and in the provision for the education of the children of the poor and of the working classes, as well as in the quality of the existing provision for education on Church principles; and the *difficulties* (as to things most obvious) consisted in the unusual prostration of Church influence in the parish,—in the want of discipline, arrangement, and regard to ecclesiastical order—and in the smallness of the means at the command of the vicar (the income of the living being very inadequate) for enabling him, by personal pecuniary aid, or sacrifices, to do what was at once desirable and needful towards the removal of existing deficiencies.”

That little sympathy with the Church existed in Bradford at that time may be inferred from the fact that a proposition for a *rate* made in the month of November, for the parish church, was negatived by a majority of 2168! And that no great tenderness was manifested for the vicar is seen in the following extract from an anonymous letter received at a subsequent period by Dr. Scoresby, the greater part of which is quite unfit for publication :—

* Memorial to the Lord Bishop of Ripon.

"to doctor scorsby vicar of Bradford on his attempting to lay A Church Rate at a time when the people have been so far Enlitened as to know that they have no right to pay it. no sir if you are determined to have this rate you may get it if you can or if you dare. remember sir you are only a man you may be in your Grave before the rate be collected. the nights are dark guns are plentiful powder is cheap men ARE DETERMINED not to be robbed by the parson any longer if you dare either to come yourself or to send collectors you may perhaps where you expect to Receive A Shilling, Receive A Bullet; And your head be the Receiver instead of your pocket. think of the curses in the Book of isaiah Pronounced Against those who oppress the poor. But may be you do not believe that part of Skripter be that As it may you may believe this that the only way For you to save your life is to be quiet About the Rate."

The revenues of the Vicarage of Bradford (comprising a charge of considerably over 100,000 souls) were, in the first year of Dr. Scoresby's office, in the aggregate, £582, 8s. 2d., of which sum £139, 15s. 8d. alone was derived from a certain source, the remainder arising out of *fees and Easter dues*. Of this income, Dr. Scoresby paid annually (including the vicarage) £300 to his curates, leaving only about £280 for his own income. To a meeting of parishioners he one day said, "I may state that the total endowment of the Church has been paid by myself to my curates. I have received nothing for the revenues of the parish but what has resulted from the

fees and dues ; and during the two years I have been in the parish, the very sums I have received from the parish church have required to have added to them three times the amount out of my own private property." With a view of meeting the existing *difficulties* and *deficiencies*, Dr. Scoresby arranged a PLAN based upon the following propositions :—

* " 1. The bringing to bear upon the parish, especially upon the unprovided or spiritually destitute, districts, an effective pastoral superintendence and ministration, by means of increase in the number of the clergy, so that a curate might be planted in the midst of the people and so identified with them, as their minister, in each particular district.

" 2. The endeavouring to obtain an accession of churches, and, as a preliminary step and essential accompaniment, of parochial schools.

" 3. The endeavouring to obtain something like ecclesiastical order in the parish, with that limitation of clerical labour, by means of districts, by which the several portions of the population might have a more effective and particular spiritual superintendence—and whereby the spiritual husbandry of the several limited and manageable districts *might be well done*, instead of that labour being rendered comparatively inefficacious by being diffused over a field so large as to be utterly beyond the power of a minister to manage.

" 4. The improving, as means might occur, of the poor

* Memorial to the Lord Bishop of Ripon.

benefices in the parish, and of the stipends of curates. And,—

“ 5. The due maintaining of the parish church—both as to the rights of the vicar and the revenues of the living—as an obvious essential for enabling the vicar of such a parish effectually to carry out the several important objects here enumerated.” *

His first object was to obtain an efficient staff of ministers, which he effected in a short time; for, as the memorial relates,—

“ By the liberal assistance of the ‘ Church Pastoral Aid Society,’ and of the ‘ Society for Additional Curates,’ in one case, your memorialist—the good hand of God being with him—was enabled within a few months of his appointment to Bradford, to present to your lordship for licence, or as candidates for Holy Orders, a very efficient clergyman as an additional and principal curate for the parish church, and *three* other curates for the spiritual charge of the unprovided districts—in all, *five* additional clergymen, besides incumbents for the vacant chapels. And the success of the plan in this particular was soon encouragingly manifest—not only in the influence obtained over many who had heretofore been wholly careless about their eternal destiny, or lamentably estranged from the bosom and care of the Church, but in the at-

* To the original document the following note is appended:—

“ The above plan has been submitted to my inspection, and meets with my full approval. (Signed) “C. T. Rixon.”

“ Feb. 6th, 1840.”

tainment of divine service, regularly performed, in four or five different school-rooms, or other places, sanctioned by your lordship, *in districts where no Church service had before been performed*, and in the establishing of *five* Sunday schools, and one day school (with a good prospect of increase in both classes of schools) *in totally new positions.*"

So far well. We come now to mention briefly the circumstances which caused Dr. Scoresby so much pain. The larger portion of the revenues of the parish church, it must be remembered, was derived from *fees* for offices performed either in the mother church itself or in the chapels of ease; but the ministers of those "ancient chapels" were permitted, by long standing agreement, to *divide* the *fees* received by them, in their respective chapels, with the vicar, whereby the entire revenues of the parish church, or of the vicarage, were reduced to considerably below £600. Soon after Dr. Scoresby entered upon the living, *five* new churches, in several instances the property of private individuals, were in course of erection, but none of them consecrated, and it was out of the question of *fees* payable by these churches to the parish church that that painful controversy, to which reference has been made, arose. Dr. Scoresby could not righteously have given up to the ministers of these churches a portion of the fees as was done to the ministers of the "ancient chapels," because, had he done so, he would have reduced the revenues of the vicarage to a mere trifle, and this, as trustee in possession of the living, he

could not honestly do ; for although he might, and would gladly, have purchased peace to himself, under other circumstances, by relinquishing a large portion of the church's income, yet he could not do so, under existing circumstances, without perpetrating a fraud upon his successors ; and, therefore, upon the principle of maintaining the rights of the church he rested throughout his tenure of office, and in all his difficulties he carried with him, in his endeavours to overcome them, the sanction, and countenance, and esteem of his diocesan. In an address to a meeting touching these matters, he explained what the position of future vicars would have been had he not firmly maintained the rights of the parish church. Speaking of yielding the revenues, he asks:—

“ Could I, as a faithful steward, dare to do this? If it had been a small matter I might, with the sanction of the patrons, have made the surrender, and would willingly have done so, had it been a matter concerning myself alone—having means for my maintenance independent of the produce of the living, it might have been yielded ; but I could not but feel that I stood as trustee for future vicars, and that if I had shrunk from my duty in this matter, those who came after me might have censured me for my weakness in abandoning the rights of the living. That you may distinctly know how impossible it was for me to escape from this painful collision, without being a traitor to my trust and to the vicarage, I have carefully calculated what the result on the revenues of the parish church for the last year would have been had

I failed unhappily in my trying defence of them. The statement, comprising every item of fees, I hold in my hand. The result is, that the sum of £305, 9s. 5d. would have been withdrawn from the income of the vicar alone in one year, besides some hundreds of pounds more from the revenues of officers of the parish church and of other incumbencies. I have also calculated what the effect would be on the total income. Deducting this abstraction from the total amount of revenue, with the payments to curates by me of £195, 10s. 8d. for the same year, and the rent paid for a house, in lieu of the old vicarage given to the curates, there would have remained a clear income for the vicar of a parish of 120,000 souls, in the most productive year that ever occurred, of £30, 3s. 5d."

To meet the continual agitation and excitement which prevailed during the whole period of Dr. Scoresby's tenure of office in the vicarage of Bradford, great moral courage and tact were required. The manufacturing districts, it will be remembered, were in a very agitated condition about this period. The year 1835 was the last of a series of bright and prosperous seasons, whose prolific harvests had spread peace and plenty throughout the country. 1836 changed the spirit of the dream. Fairly balanced sunshine and shower gave place to continual rain, in which the northern parts of the United Kingdom were well-nigh deluged. A bad harvest ensued; the agricultural produce of the country was no longer adequate to the maintenance of the people; grain had to

be imported, and the price of wheat rapidly rose, as much as ten shillings per quarter. 1837 revealed a gleam of sunshine, and the harvest was somewhat better than the preceding one; but still prices kept rising. In 1838 incessant rains destroyed the harvest, and wheat attained the enormous price of 81s. 6d. the quarter. In 1839 the deluging rains continued, and the crops were scarcely better than those of 1838. The harvests of 1840 and 1841, though better than the preceding ones, were still very poor and insufficient, without the aid of imported corn, for the supply of the country.

Had other depressing agencies been altogether wanting,—had there been no destructive crusade against the American banks, entailing commercial panic upon the whole of Europe,—no Irish agitators at hand to fan the embers of discontent into a blaze of open rebellion,—dear bread alone, the effect of the bad harvests, would have been more than sufficient to generate disaffection amongst the working classes. Whilst provisions had risen to double their ordinary price, wages were reduced to half their usual rate; everywhere was sickness, want, and misery. It was not surprising, then, that, guided by a few talented but lawless and designing leaders, the labouring population was easily persuaded that the only means of relieving itself from its wretched condition was in combining to resist its oppressors, as the employers were now termed. To give effect to this, "Secret Societies" were organized, by whom the most daring outrages were committed upon such as would not conform to their rules. "Trades Unions" were devised, with the

view of prolonging the strife by providing means of support to the most needy sufferers; another of their functions, and one not unfrequently exercised, being to intimidate those who were otherwise willing to work; whilst another class, whose aim was to gain social ends by political means, raised a cry, destined to run riot through the country, for the "six points of the Charter." The Market Place in Devizes, the Bull Ring in Birmingham, the West Gate Hotel in Newport, had each and severally been the centre of Chartist riots and outrages, by which many lives were sacrificed and much property destroyed.

In a letter to Mrs. Clark, dated August 18, 1843, Dr. Scoresby describes the following encounter with a mob of disaffected operatives:—

"The sad state of the manufacturing districts, and the excited state of Bradford among the rest, has prevented us from leaving home as we had designed. Thank God, matters here are, to appearance, quieter, and the mills this morning recommenced working. On Tuesday I was in the middle of the whole body of the insurgents coming in from other places, to the amount of some thousands. Their language and insults were dreadful, reminding me of the characteristics described by the apostle—'devilish.' I accidentally encountered them at the turnpike gate leading to our house. They were coming in, ten abreast, all armed with sticks and bludgeons. Just as I was observing them passing—listening to their sad language, and attempting to count their files—the bugle of the

lancers sounded, and up galloped the whole troop, with their lances spread out on both sides. I had some difficulty in keeping my little horse, which was sadly frightened, out of the way. It had well-nigh backed me among the troopers. The flight of the insurgents over the hedges and walls of the road was amusing—if, under circumstances so hazardous, one might be amused. I waited till the lancers returned, and then quietly went through the midst of the mob which had returned into the road. Their language to me was grossly abusive and threatening. When they said anything very bad to me, I sometimes stopped and quietly remonstrated with them or spoke to them. Of course, they were not in a state to be civil, but, in general, cried out with other insults. Through the divine mercy, only *words, ill words*, were aimed at me. I had no fear of them; nor did I go out of a most leisurely pace whilst I was among them. This was at five o'clock. In the evening the lancers scoured the streets, deprived many of their clubs, and dispersed them."

In spite of all these untoward events, however, Dr. Scoresby continued his contributions to scientific knowledge; he attended regularly the meetings of the British Association, and frequently contributed papers. In a letter from the Rev. Mr. Dury, bearing date 1843, the following passage occurs: "I think, by universal consent, you are acknowledged the *princeps* of working magneticians, and I wish you had more time to interrogate Nature on this subject; it would be quite as plea-

sant to you, and much more profitable to others, than skirmishing with Chartists and Socialists in Bradford." He had also frequently delivered lectures on scientific subjects, especially several to the *United Service Institution* in London, which had required much preparation. The Prince Consort honoured him with an interview, as we read in the following letter from Dr. Scoresby to H. U. Janson, Esq., dated 14th February 1842:—

"The immense labour of this parish requires all my time, so that I can do but very little in science, and that at many intervals. My magnetic researches, however, have made progress, so as now to place the results in a very satisfactory position. I had the honour, as you perhaps heard, of exhibiting my improved apparatus to Prince Albert in June last, who kindly gave me three quarters of an hour at a critical period of public affairs, repeated with his own hand some of the experiments, and expressed himself much pleased. A little matter of science [on improved magnets, and method of detecting their powers]—a recreation merely—has been published, of a copy of which I beg your acceptance. I beg you to offer my thanks to the [Exeter Literary and Philosophical] society for their kind remembrance in electing me an honorary member. It is matter of regret that time will not allow me to answer this kindness by any communication at present beyond this mere acknowledgment."

But the excessive fatigue and prostration produced by his protracted labours having brought Dr. Scoresby into

a very critical condition of health, and believing, in the early part of the year 1844, that his strength was no longer adequate to the conscientious discharge of his ministerial functions, he tendered his resignation. In reply to a number of addresses praying him to remain, he said :—

“ As to my resignation of my charge of this vicarage, I may briefly state that I had for some time been anxiously doubting whether it was my duty, at such a serious sacrifice of health and peace of mind, and with so many secularizing influences, injurious to the spiritual interests of my own soul, as I felt them to be,—I say I doubted whether it was my duty to continue to contend against difficulties and severe opposition which seemed to be interminable.” “ If I clearly should see that my remaining here was accordant with the will and design of that all-wise Providence which placed me amongst you, my determination would be at once made ; and whether for happiness or sorrow, whether for peace or tribulation, I would not dare to say, ‘ Lord, what doest thou ? ’ ”

He ultimately withdrew his resignation, and accepted, at the suggestion of the Bishop of Ripon, a six months’ leave of absence, the greater part of which he proposed to spend in visiting Canada and the United States of America. In a letter to Mrs. Clark he said, “ I have had too much writing, and am suffering by it. Perhaps, please God, a foreign voyage might be useful to my

health" "I have been so overworked that I have really been obliged to postpone all business that could wait. Things, I hope, through the divine mercy, are getting better here as to our comfort and satisfactory labour; but the work is, I fear, more than my health can stand."

He sailed from Liverpool on the 19th of April (1844), in the *Patrick Henry*, bound for New York. The voyage, which occupied thirty-three days, had a beneficial effect upon his health, but was otherwise without general interest; and of his tour in the country the only circumstance that need be mentioned, besides the happiness of meeting with his brother, who resides with his family at Centreville, is that of his visit to Lowell. The unhappy, and, generally speaking, degraded condition of the female factory operatives in Bradford, had for a long period engaged his attentive consideration, and he felt it to be his duty to make a strong effort in their behalf. With this intention he made a point of visiting Lowell, a manufacturing city of importance situated on the river Merrimack, near its confluence with the Concord, the power of whose combined waters formed the chief attraction to those who first established manufactories there. Desirous of gaining as intimate a knowledge as possible of the habits and condition of the female operatives in this remarkably thriving city, he had previously armed himself with influential letters to its leading manufacturers, whereby free access was obtained for him to all the mills, and every inquiry respecting the domestic habits of the operatives was freely answered. The infor-

mation thus obtained was very remarkable, and tended materially to strengthen Dr. Scoresby's belief that great good might be worked amongst the same class of people at home ; and although fully alive to the fact that many of the circumstances which operated in favour of the respectability of the class above mentioned, could never be incorporated in any scheme for the benefit of English factory girls, he nevertheless felt that the experience he had gained by his visit to Lowell placed him in a position to offer some suggestions (which were subsequently published*), for the amelioration of their condition. A correspondent of the *Boston Daily Advertiser* mentioned Dr. Scoresby in the following terms :—

“The Rev. Dr. Scoresby, of Bradford, in Yorkshire, England, is personally known to many of your readers. No traveller from his country has left behind him, in this, remembrances of more cordial esteem. With intelligence and acquirements, such as do honour to the Established Church of which he is a minister, what endeared him still more to those who had the happiness of his acquaintance, was his genial and comprehensive philanthropy. We have national faults and foibles enough, Heaven knows ; and a mind like his could not be insensible to them. But he was not one of those who ‘journey from Dan to Beersheba, to report that all is barren.’ He seemed to come with generous and Christian purpose,

* “American Factories and their Female Operatives, with an Appeal on behalf of the British Factory Population and their Improvement.” 12mo. London : Longmans. 1845.

to see and greet all that was good, and to carry it away for diffusion and increase."

"No one who sets himself about doing good, can guess how far the good is going to extend. When the factory system was introduced in this neighbourhood [Lowell], the union of factory labour with respectability and innocence of life was an unsolved problem. The experience of England was against us, and the best men were uneasy about the effect of such a dangerous form of industry upon the decent habits of our New England life. The merchant builders of Lowell took the matter in hand, and executed it with the same sagacity and success that have attended all their other undertakings. They demonstrated that manufacturing labour on a great scale, in a crowded city, can co-exist with as high a condition of physical, mental, and moral well-being as any other form of industry. So far, so good, and very good it was. But that is not the end. By-and-by from the centre of manufacturing wealth and its attendant woes, comes a philanthropist with a mind to estimate their work, and a heart to feel its excellence, and long for its extension. And he goes away to exert himself with the authority of high station, the force of great talent, and the advantages of local knowledge and influence, to transplant the benefit to a foreign land."

Dr. Scoresby returned to England in the month of September (1844), and, on the 14th, rejoined Mrs. Scoresby at Bradford. No sooner was he settled at home again, than he set himself to work out his factory ope-

ratives' scheme. In the month of November he issued a circular inviting the manufacturers and master spinners of Bradford and its neighbourhood to "confer on means of improving the social and moral condition of the female factory operatives." To an important meeting thus assembled, he addressed himself first of all upon the existing condition of this class in Bradford, and of the noble enterprise in which he wished them to engage.

"The object, in every view of it," he said, "was a momentous one. It involved whatever was elevated, whatever was holy, whatever was noble, whatever was philanthropic, whatever was Christian. It contemplated, by the blessing of God, their doing their part in trying to raise the female population of Bradford to a higher condition ; to induce them to think of what was befitting them as rational beings ; to impress them with a due sense of what they might and should be, as the women of a great country, and, above all, as immortal beings, designed by the mercy of God, if they neglect or slight not that mercy, for an eternity of felicity."
 "And now," he afterwards continued, "comes the question, *What can be done ?* I do not contemplate that all the manufacturers in the parish can be brought to adopt a different system from that which is prevalently pursued, nor that all who give their assent to the principle will cordially co-operate in working it out ; I do not indulge the utopian notion, that all the female operatives will benefit by any efforts that may be made ; but I do contemplate effecting, by the assistance of the gentlemen

around me, and under the divine blessing, a reasonable measure of good ; and as much as in any other Christian and philanthropic enterprise. There is no peradventure in the result of what is begun, continued, and ended in God, and with a view to his glory ; the only question is as to degree or time, which the divine Being reserves to himself ; but his blessing will follow, and good will result not only to those cared for, but also to the parties engaged in the work ; they will stand in a higher position ; they will command the services of the best and most respectable work people, and their establishments will have a Christian dignity about them and a high character not found in others."

"And now," he concluded, "in regard to the scheme. The plan I would suggest for consideration will be :—

1. The establishment of an association of the employers of female labour, and of other friends to the improvement of the social, moral, intellectual, and religious condition of our female operatives.
2. The formation of a general board, consisting of a selection of manufacturers and spinners, associated with the senior clergy and dissenting ministers of different denominations, and other individuals favourable to the object ; for any institution of this kind must be catholic in its spirit.
3. The appointment of a visiting committee or committees, comprising a ladies' branch, for visiting from time to time the residences of the female operatives, and especially the lodging-houses, and reporting thereon.
4. The establishment of evening schools, and mutual improvement classes, in different parts of the town, for males as well as females.
5. The establish-

ment of a library of useful books for the common use, either without payment or on a small subscription, of all the factory operatives employed by the principals connected with the association. 6. The establishment of a factory-operatives' sick club. 7. The appointment of means for facilitating and encouraging deposits in savings' banks. 8. I may add, the employment of matrons for overlooking some of the departments of female labour."

The interval between his return from America in 1844 and the early part of 1846, was spent by Dr. Scoresby much in the same manner as were the former years of his residence in Bradford. In March 1846 he paid a visit to Birr Castle, by the kind invitation of Lord Rosse, of which he speaks in terms of warmest delight. "I have been here visiting and receiving the *greatest* kindness and attention for near three weeks, and employing, when the weather would permit, Lord Rosse's wonderful telescope."

At length, in a letter dated 21st March, 1846, he says:—

"I give up Bradford in September, and without any church to go to. But I have been *overworked*, and both myself and dear wife injured irreparably by the ill usage we have had, and the excessive harass and labour. The most painful effect with myself (which, however, I wish you *not to mention anywhere*) is on my sight. I am very anxious about it, and consulted three eminent

oculists, two of them in London. They all gave me encouragement, and said I must *do less*. But yet I am anxious, as I think the indistinctness of vision increases."

The additional labour in which the winding up of his ecclesiastical affairs in Bradford involved him, proved too severe for his already exhausted frame; insomuch that about the date contemplated for his departure, he became subject to repeated and very debilitating bilious attacks, the enervating effects of which left him exposed to an epidemic of erysipelas, then raging in Bradford. After a more than usually severe attack of this kind, in the first week of November, erysipelatous symptoms manifested themselves in the face, and so rapid was the further development of the disease, that in a few hours his life was placed in imminent danger. The critical period, however, happily passed over in a favourable manner, and on the 2d of December he was so far restored as to be able to receive a large number of the clergy at the vicarage, from the pen of one of whom we have the following particulars:—

"The service for evening prayer having been read by one of the incumbents, the Rev. the Vicar expressed his great gratification at seeing so many of the clergy around him. He feelingly alluded to his contemplated departure from the parish, and to his recent recovery from a painful and serious illness, which had brought him to the brink of the grave. He said he had looked with hope and satisfaction to the time when he should be so far re-

covered as to meet and confer with the clergy generally, and to communicate to them the reflections into which he had been led, and the experience with which he had been favoured during his late very dangerous illness, believing that, under the divine blessing, such a meeting might be useful, and tend to bind the hearts and affections of the clergy together. The late affliction, though a most merciful dispensation of his heavenly Father, had served to strengthen his assurance of the reality of the Christian faith; and though at one time under the full impression that his dissolution was near at hand, and that his feet were in the swellings of Jordan, he had been overpowered by a sense of the vast responsibilities of the ministerial character, and by a feeling of deep humiliation; yet in those solemn hours he had derived comfort from reflecting, that as the vicar, he had never 'shunned to declare unto his parishioners the whole counsel of God,' and from the consciousness that in his ministerial and pastoral intercourse he had never intentionally erred. During this sickness he had been more than ever impressed with the beauty, comprehensiveness, and most perfect adaptation of the services of the Church contained in the 'Book of Common Prayer;' not only in the office for the visitation of the sick, but in the daily prayers, psalms, and lessons, which had been kindly read to him by his clerical brethren, chiefly by the clergy connected with the parish church. He mentioned his opinion that the ministers of the Church of England are placed pre-eminently in a most advantageous position for advancing the social condition of the country, having full liberty to

declare their opinions respecting the relative duties and responsibilities of all classes towards each other, especially such as are involved in the relations of our great manufacturing communities, and having perfect freedom to take a part in all the great public movements which tend to the moral and social improvements of the working classes."

The rapid improvement which had hitherto taken place received a sudden check in the beginning of the year. Deeming change of air and scenery essential to his recovery, he proposed a visit to his esteemed friends, Mr. and Mrs. Rathbone, of Greenbank, near Liverpool, beneath whose hospitable roof he had spent so many happy days in former years. He removed thither in the first week of January 1847, and received at their hands a cordial welcome; their exceeding attention and kindness towards him during his recurrent illness, indeed, was a never-failing matter of grateful remembrance. The severity of the relapse which occurred soon after his arrival at Greenbank is expressed in his own words, addressed to a friend in Exeter, in a letter bearing date 21st of April 1847. They are as follows:—

"The long and severe illness under which it pleased our heavenly Father to call me to suffer, has rendered necessary an entire cessation from all business for a considerable period. The attack of erysipelas which I had in December was, no doubt, prepared for by a perseverance in duties and mental labour of an *overwhelming*

character, pursued, with little intermission, for a series of years in Bradford. The first attack, by reason of the continuance of fever and inflammation about the head, recurred in January and February, but, under the divine mercy, was subdued during that month, leaving me in a state of utter debility and prostration of the system. Thank God, I have been gaining strength for some ten weeks, and have now for some time been quite well. Next week (D.V.) I propose to pay a short visit to Bradford, to which place letters being sent will always reach me. Mrs. Scoresby, who is with our friends in the Isle of Wight, is, I grieve to say, yet very unwell.

“P.S.—Being at present without professional employment,—for which I am not anxious, unless in some pleasant situation,—I shall probably (D.V.), be moving about for some months, by way of recreation, and have my mind turned, as one point of travel, to Exeter.”

By this time the good seed which Dr. Scoresby had sown during his ministerial labour in Bradford was beginning to manifest symptoms of vitality. The small green leaves were appearing above the surface, giving promise of a fruitful harvest; and his heart was gladdened by these first-fruits of his patient toil. On the occasion of his visit to Bradford, in the month of June, he was invited by the ladies' committee of the Factory Girls' Moral and Social Improvement Society to join in their first social gathering. On that occasion not less than *five hundred* factory girls of respectable habits and moral character assembled to partake of tea together, and to

express their warmest acknowledgments to their late vicar, by whose instrumentality they were privileged that day to enjoy a position in the scale of social life far above anything which they had hitherto known. In the midst of this joyous assemblage, the Society of Odd Fellows were permitted to present a handsome silver inkstand to Dr. Scoresby, in testimony of their personal regard for him, and of their appreciation of his services whilst resident among them. Dr. Scoresby, it was said, "was looking remarkably well, and as he walked round the room, chatting familiarly with his friends and late parishioners, he seemed to diffuse joy and gladness on every side."

The real purpose of his visit was, in compliance with their invitation, to receive at the hands of a large body of his late parishioners a handsome testimonial in silver, consisting of tea, coffee, and part dinner service; each piece bearing the following inscription:—

Presented

TO THE

REV. WILLIAM SCORESBY, D.D., F.R.S.,

MEMBER OF THE INSTITUTE OF FRANCE, ETC.,

ON THE OCCASION OF HIS RESIGNING THE IMPORTANT CHARGE

OF THE VICARAGE OF BRADFORD, YORKSHIRE.

AS A

TESTIMONIAL

OF THE

AFFECTIONATE REGARD AND ESTEEM OF HIS FRIENDS.

JUNE 1847.

In the course of the presentation address, the chairman made the following remarks : *—

“ He would first allude to Dr. Scoresby’s exertions in the cause of education. Four schools have been built by the efforts of that gentleman, at a cost of about £4000, and, with one exception, entirely on his own responsibility as to the funds. When Dr. Scoresby came to Bradford, there was not a single child under daily education in connection with the parish church, now about 1500 children were receiving daily instruction, exclusive of some 1200 Sunday scholars. Besides the erection of these schools, Dr. Scoresby had also undertaken the entire pecuniary responsibility of carrying on all the day, and some of the Sunday schools, relying only on the children’s pence, the annual collections, and, for two or three years, a small contribution by the National Society. Their expenses exceeded the sum of £4000. They were also indebted to Dr. Scoresby for the establishment of the Church Institution, for the expenses of which he was for two or three years solely responsible, besides giving his valuable assistance in lectures, &c. He might also refer to the subdivision of the parish, now in progress; the raising of funds for district churches, as at Eccleshill; and to the introduction of so efficient a body of clergymen into the town.”

Addressing Dr. Scoresby, the chairman concluded with these words :—

* From the *Bradford and Wakefield Observer*.

“When we remember the period of your first coming among us, a peculiar period in the history of the Church in Bradford—when we remember the great exertions you have made for extending the boundaries of your Master’s kingdom—when we remember the great personal sacrifices you have been called upon to make, and all this, too, in the midst of trials and difficulties of no ordinary character,—we feel that the seed you have thus sown, although you may not be permitted to see the result, will be like bread cast upon the waters, which shall be found after many days.” . . .

The younger members of his late flock, the Sunday-school teachers whom he had reared under his own watchful eye, embraced this opportunity of presenting their revered pastor with a copy of the Holy Bible and a Prayer Book, testifying their appreciation of his ministry among them.

Dr. Scoresby was too much affected by the scene before him to utter a brilliant valedictory address. In a few words he expressed his thanks for their kind and affectionate bearing towards him, and having spoken feelingly of his separation from them, he left them, “sorrowing most of all for the words which he spake, that they should see his face no more.”

CHAPTER XV.

SECOND VISIT TO AMERICA—MRS. SCORESBY'S DEATH—RETURN TO ENGLAND;
"ATLANTIC WAVES"—HONORARY ELECTION TO THE ATHENÆUM CLUB—
RESIDENCE IN TORQUAY—LITERARY AND SCIENTIFIC PURSUITS—SEVERN
ACCIDENT—LECTURESHIP IN UPTON CHURCH.

1847-1853.

AFTER a round of visits paid by Dr. Scoresby to various friends in England and Scotland, he rejoined Mrs. Scoresby about the end of August, at Woodville, near Cork, whither she had removed from the Isle of Wight. Her health was somewhat improved and good hopes were entertained of her ultimate recovery, for which she mainly relied on the beneficial influence of her native air. She was still, however, so much an invalid as to be unable to participate in the least degree in the enjoyments of the domestic circle. In these circumstances,—and with the full assurance both of herself and her medical attendant, that, surrounded as she was by every comfort and attention which the most anxious relatives could bestow, she would gradually improve in health and strength,—Dr. Scoresby consented to take advantage of his liberty from ministerial employment to undertake a second voyage to the United States of America.

He sailed from Liverpool, in the Mail Packet bound for Boston, on the 4th of October, and on the 17th of the same month wrote to Mrs. Clark from Halifax, Nova

Scotia, telling of his prosperous voyage so far, "and though," he concludes, "we are crowded with passengers (132), I have continued to get on pretty well, and have gained, I hope, some strength, walking much and with little fatigue. From Boston, I propose (D.V.) going first to Canada to see the Governor-General, &c., and then to return to Boston before the winter sets in, where, care of Abbot Lawrence, Esq, Boston, Massachusetts, U. S., I hope to hear from you."

The severity of the winter prevented his making a very extensive tour. His visit to Lord Elgin, the Governor-General of Canada, and that to the veteran and talented statesman, Mr. Clay, at Washington—as also his excursions to many places of note, especially that to the Falls of Niagara, afforded him much gratification. In the beginning of the year he spent a short time on a visit to the Bishop of New Jersey, and afterwards became the guest of the Bishop (Potter) of Pennsylvania. Whilst sojourning with this most kind and estimable prelate, he received the overwhelming intelligence of his wife's death. The following was written to Mrs. Clark in reply to the distressing tidings—it is dated 26th of January, 1848.

"The sad memorials, by three letters, of the departure to our heavenly Father of the spirit of my loving and beloved partner, reached me all together. I had long believed that one so severely suffering and so much afflicted could not recover. But the doctor at Cork speaking most confidently of her recovery—of the disease being eradicated—and that in two or three months she might go anywhere,

was calculated to mislead, and I knew not but afflicted nature might bear up under the sorrow for a long period. And as I could not be with her from want of accommodation, I ventured to leave her as an easier mode of filling up, apparently, the painful interval till her anticipated return to England.

"Our heavenly Father has arranged it otherwise, in the removal to a more fitting state of one of the most strictly-conscientious, pure-minded, fervently and humbly pious, tenderly-affectionate and devoted persons I ever knew!"

"To-morrow I hope to proceed to Washington, where I wish to keep quiet, if I can, for a few days. . . . I am now, in providence, further cast abroad in the world. I pray daily for divine guidance where to fix my tent; may the Great Head of the Church guide me in this important matter."

The inclemency of the weather prevented his immediate return to England; for, although much improved in health by his travels, he was still somewhat delicate, and he therefore considered it more prudent to wait until the season was further advanced. He sailed from Boston on the 1st and arrived in Liverpool on the 11th of March. The following incidents of the voyage are taken from an article which appeared in *Household Words* entitled:—

ATLANTIC WAVES.

"One brisk March morning, in the year 1848, the brave steam-ship, *Hibernia*, rolled about in the most intoxicated fashion on the broad Atlantic, in

north latitude fifty one, and west longitude thirty-eight, fifty—the wind blowing to a hard gale from the west-south-west. To most of the passengers the grandeur of the waters was a mockery, the fine bearing of the ship only a delusion and a snare. Everything was made tight on deck ; if any passenger had left a toothpick on one of the seats, he would assuredly have found it lashed to a near railing. Rope was coiled about every imaginable item, and water dripped from every spar of the gallant vessel. Now it seemed as though she were travelling along through a brilliant gallery, flanked on either side by glittering walls of water ; now she climbed one of the crested walls, and an abyss, dark and terrible as the famous Maelstrom, which can't be found anywhere, yawned to receive her. The snorts of the engine seemed to defy the angry waters ; and occasionally when a monster wave coiled about the ship, and thundered against her, she staggered for a moment, only to renew the battle with fresh energy.

“ The cooks and stewards went placidly through their several daily avocations on board this rolling, fighting, shaking craft. If they had been Belgravian servants, or club-house waiters, they could not have performed their duties with more profound unconcern. Their coolness appeared nothing less than heroic to the poor tumbled heaps of clothes with human beings inside, who were scattered about the cabins below. An unhappy wight, who had never before been five miles from Boston, was anxiously inquiring of the chief steward the precise time in the course of that evening that the vessel might be expected to founder ; while another steward, with pro-

voking pertinacity, was asking how many would dine in the saloon at six, with the same business-like unconcern, as if the ship were gliding along on glass. So tremendous was the tossing, so extreme the apparent uncertainty of any event except a watery terminus to all expectation, that this sort of coolness appeared almost wicked.

"Then there was a monster in British form actually on deck—not braving, it was said, but tempting the storm to sweep him into eternity. The cook did not hesitate to venture a strong opinion against the sanity of a man who might, if he chose, be snugly ensconced in the cabin out of harm's way, but who *would* remain upon deck in momentary danger of being blown overboard. The cook's theory was not ill supported by the subject of it; for he was continually placing himself in all manner of odd places and grotesque postures. Sometimes he scrambled up on the cuddy roof; then he rolled down again on the saloon deck; now he got himself blown up on the paddle-box; *that* was not high enough for him, for when the vessel sunk into a trough of the sea, he stood on tip-toe, trying to look over the nearest wave. A consultation was held in the cuddy, and a resolution was unanimously passed that the amateur of wind and water (which burst over him every minute) was either an escaped lunatic or—a college professor.

"It was resolved *nem. con.* that he was the latter; and from that moment nobody was surprised at anything he might choose to do, even while the *Hibernia* was labouring in what the mate was pleased to call the most 'lively' manner. The professor, however, to the disgust of

the sufferers below, who thought it was enough to *feel* the height of the waves, without going to the trouble of measuring them, pursued his observations in the face of the contempt of the official conclave above mentioned. He took up his position on the cuddy-roof, which was exactly 23 feet 3 inches above the ship's line of flotation, and there watched the mighty mountains that sported with the brave vessel. He was anxious to ascertain the height of these majestic waves, but he found that the crests rose so far above the horizon from the point where he was standing, that it was utterly impossible, without gaining a greater height for observation, that he could arrive at any just estimate on the subject. His observations from the cuddy-roof proved, however, beyond a doubt that the majority of these rolling masses of water attained a height of considerably more than 24 feet, measuring from the trough of the sea to the crests of the waves. But the professor was not satisfied with this negative proof; and in the pursuit of his interesting inquiry, did not feel inclined to be baffled. It is impossible to know what the secret thoughts of the men at the wheel were, when the valiant observer announced his intention of making the best of his way from the cuddy-roof to the larboard paddle-box. Now he was to be seen tumbling about with the motion of the ship; at one moment clinging to a chain-box; at the next throwing himself into the arms of the second mate. Now he is buried in spray, and a few minutes afterwards his spare form is seen clinging to the rails which connect the paddle-boxes.

“Despite the storm without, a calm mathematical process is going on within the mind of that ardent observer.

The professor knew he was standing at a height of twenty-four feet nine inches above the flotation mark of the ship ; and, allowing five feet six inches as the height of his eye, he found the elevation he had obtained to be altogether thirty feet three inches. He now waited till the vessel subsided fairly for a few minutes into the trough of the sea in an even and upright position, while the nearest approaching wave had its maximum altitude. Here he found also, that at least one-half part of the wave intercepted by a considerable elevation his view of the horizon. He declared that he frequently observed long ranges extending one hundred yards on one or both sides of the ship—the sea then coming right aft—which rose so high above the visible horizon, as to form an angle estimated at two to three degrees when the distance of the wave's crest was about a hundred yards off. This distance would add about thirteen feet to the level of the eye. This immense elevation occurred about every sixth wave. Now and then, when the course of a gigantic wave was impetuously interfered with by another liquid giant, and they thundered together, their breaking crests would shoot upward at least ten or fifteen feet higher—about half the height of the monument—and then pour down a mighty flood upon the poor professor in revenge for his attempt to measure their majesties. No quantity of salt water, however, could wash him from his post, till he had satisfactorily proved, by accurate observation, that the average wave which passed the vessel was fully equal to the height of his eye,—or thirty feet three inches ; and that the mean highest waves, not including the

fighting or broken waves, were about forty-three feet above the level of the hollow occupied at the moment by the ship.

"Satisfied at length of the truth of his observations, the professor, half pickled by the salt water, and looking, it must be confessed, very cold and miserable, descended to the cabin. Throughout dinner-time a conversation was kept up between the professor and the captain—the latter appearing to be about the only individual on board who took any interest whatever in these scientific proceedings. The ladies, one and all, vowed that the professor was a monster, only doing 'all this stuff' in mockery of their sufferings. Towards night the wind increased to a hurricane; the ship trembled like a frightened child before the terrible combat of the elements. Night, with her pall, closed in the scene; it was a wild and solemn time. Towards morning the wind abated. For thirty hours a violent north-west gale had swept over the heaving bosom of the broad Atlantic.

"This reflection hastened the dressing and breakfasting operations of the professor, who tumbled up on deck at about ten o'clock in the morning. The storm had been subdued for several hours, and there was a visible decrease in the height of the waves. He took up his old position on the cuddy-roof, and soon observed, that even then, when the sea was comparatively quiet, ten waves overtook the vessel in succession, which all rose above the apparent horizon; consequently, they must have been more than twenty-three feet—probably about twenty-six feet—from ridge to hollow. From the larboard paddle-box, to which the professor once more scrambled, he observed that

occasionally four or five waves in succession rose above the visible horizon, hence they must have been more than thirty feet waves. He also observed that the waves no longer ran in long ridges, but presented more the form of cones of moderate elongation.

“Having so far satisfied himself as to the height of Atlantic waves in a gale of wind (the professor's estimate must not be taken as the measurement of the highest known waves, but simply as that of a rough Atlantic sea), he directed his attention to minuter and more difficult observations. He determined to measure the period of time occupied by the regular waves in overtaking the ship, their width from crest to crest, and the rate of their travelling. The first point to be known was the speed of the ship; this he ascertained to be nine knots. His next object was to note her course in reference to the direction of the waves. He found that the true course of the vessel was east, and that the waves came from the west-north-west, so that they passed under the vessel at a considerable angle. The length of the ship was stated to be two hundred and twenty feet. Provided with this information the professor renewed his observations. He proceeded to count the seconds the crest of a wave took to travel from stern to stem of the vessel; these he ascertained to be six. He then counted the time which intervened between the moment when one crest touched the stern of the vessel and the next touched it, and he found the average interval to be sixteen seconds and a fraction. These results gave him at once the width between crest and crest: as the crest travelled two

hundred and twenty feet (or the length of the vessel) in six seconds, and sixteen seconds elapsed before the next crest touched the stern, it was clear that the wave was nearly three times the length of the vessel; to write accurately, there was a distance of six hundred and five feet from crest to crest.

"The professor did not forget that the oblique course of the ship elongated her line over the waves; this elongation he estimated at forty-five feet, reducing the probable average distance between crest and crest to five hundred and fifty-nine feet.

"Being quite satisfied with the result of this experiment, the hardy professor, still balancing himself on his giddy height, to the wonder and amusement of the sailors, found that the calculations he had already made did not give him the actual velocity of the waves. A wave-crest certainly passed from stern to stem in six seconds, but then the ship was travelling in the same direction, at the rate of nine geographical miles per hour, or 15·2 feet per second; this rate the professor added to the former measure, which gave 790·5 feet for the actual distance traversed by the wave in 16·5 seconds, being at the rate of 32·67 English miles per hour. This computation was afterwards compared with calculations made from totally different data by Mr. Scott Russell, and found to be quite correct.

"With these facts the professor scrambled from the larboard paddle-box of the *Hibernia*. He had also made some observations on the forms of waves. When the wind blows steadily from one point, they are generally

regular ; but when it is high and gusty, and shifts from point to point, the sea is broken up, and the waves take a more conical shape, and assume fantastical crests. While the sea ran high, the professor observed now and then a ridge of waves extending from about a quarter to a third of a mile in length, forming, as it were, a rampart of water. This ridge was sometimes straight and sometimes bent as of a crescent form, with the central mass of water higher than the rest, and not unfrequently with two or three semi-elliptical mounds in diminishing series on either side of the highest peak.

“ When the wind had subsided, a few of the bolder passengers crawled upon deck in the oddest imaginable costumes. They had not much to encounter, for about a third part of the greater undulations averaged only twenty-four feet, from crest to hollow, in height. These waves could be seen and selected from the pigmy waves about them, at the distance of a quarter of a mile from the ship.

“ The professor had been very unpopular on board while the stormy weather lasted, and the ladies had vowed that he was a sarcastic creature, who *would* have his little joke on the gravest calamities of life ; but as the waves decreased in bulk, and the wind lulled, and the sun shone, and the men took off their oil-skin coats, and the cabin-windows were opened, the frowns of the fair voyagers wore off. Perfect good-will was general before the ship sighted Liverpool ; and even the cook, as he prepared the last dinner for the passengers, was heard to declare (in confidence to one of the stokers) that, after all,

there might be something worth knowing in the professor's observations.

"When the professor landed at Liverpool, he would, on no account, suffer the carpet-bag containing his calculations, to be taken out of his sight. Several inquisitive persons, however, made the best use of their own eyes to ascertain the name of the extraordinary observer, and found it to be legibly inscribed with the well-known name of SCORESBY.

"That his investigations may be the more readily impressed on the reader's mind, we conclude with a summary of them. It would seem from Dr. Scoresby's intrepid investigations, that the highest waves of the Atlantic average in—

Altitude.....	43 feet.
Mean distance between each wave.....	559 feet.
Width from crest to crest.....	600 feet.
Interval of time between each wave.....	16 seconds.
Velocity of each wave per hour.....	32½ miles.*

Dr. Scoresby continued an invalid during the remainder of the year 1848. His health, indeed, was far from good, and promised but a tardy restoration. The summer months were agreeably spent in visiting many kind and hospitable friends, among whom he mentions with grateful remembrance Sir John and Lady Matilda Maxwell, Sir Michael Shaw Stewart, Mr. Napier of Shandon, Lady Franklin, and others. Sir George Back intimated his intention of proposing Dr. Scoresby's "admission into the Athenæum, under Article II. of the rules of the Club;"

* These figures correspond with a statement made in a scientific paper read by Dr. Scoresby before the British Association in 1850.

this he effected with success on the 30th January 1849. The Rev. Theodore Dury, in advising Dr. Scoresby of this honour, says: "It is customary for members who are elected *over the heads of one thousand candidates* to write a letter of acknowledgment or thanks to the committee."

Dr. Scoresby concluded one of his letters, written towards the close of 1848, with the following words:—"Next, if it please God, I propose visiting Brighton and Exeter, and then, perhaps, taking up my winter quarters somewhere." He was now indeed homeless and solitary; for, numerous as were the friends desirous of entertaining him within their respective domestic circles, and closely as his time was occupied with scientific investigations varied by occasional ministerial duties, his heart ever and anon reverted to the delights of a domestic hearth, whose joyous attributes none knew better how to appreciate than he.

It was with no small degree of pleasure, then, that his friends received, during the summer of 1849, an intimation of his projected marriage. He was united, on the 7th September 1849, to Georgiana, youngest daughter of William Ker, Esq. of Gateshaw, Roxburghshire, and the Castle, Torquay, at the latter of which places Dr. Scoresby built a handsome villa in which he spent the remainder of his life.

It was about this period that the return of the *Enterprise* and *Investigator* from their fruitless Arctic voyage in search of Sir John Franklin and his brave associates so greatly disheartened the public. Fruitless, not from any want of courage, zeal or talent on the part of their

gallant commander, Sir James Ross, or of his followers, but from circumstances over which they could exercise no control. After their return people began to speak of the inutility of such expeditions, whilst not a few talked of the waste of public money ; so that it required all the skill and energy of the promoters of search expeditions to bring about a renewed interest in behalf of our missing countrymen. In these endeavours Dr. Scoresby was zealously engaged, and was one of the last to give up hope. In 1850 he published "The Franklin Expedition," which was very well received ; he formed also one of the "Arctic committee," and was in constant correspondence with the Lords Commissioners of the Admiralty, who did him the justice to acknowledge in a complimentary manner his "valuable contributions to the cause." Besides the sympathy, common to all, with the absent adventurers, he was moreover animated by a sincere regard for Lady Franklin, with whose noble efforts he had the privilege of a friendly association. He would have been one of the foremost to congratulate Captain M'Clintock, had he lived to hear the result of his generous and intrepid enterprise.

Dr. Scoresby's literary and scientific productions appeared in rapid succession after his settlement in Torquay. Besides THE FRANKLIN EXPEDITION, he published likewise in 1850, JEHOVAH GLORIFIED IN HIS WORKS, a sermon preached at the meeting of the British Association in Edinburgh ; SABBATHS IN THE ARCTIC REGIONS ; THE MARY RUSSELL, a Narrative of an Extraordinary Massacre, with Reflections on the Responsibility of Lunatics ; a paper ON COLUMNAR CRYSTALLIZATIONS OF GROUND ICE, in the

Edinburgh New Philosophical Journal; the substance of two lectures on ZOISTIC MAGNETISM; and a contribution, ON THE HEIGHT, BREADTH, AND VELOCITY OF THE HIGHER WAVES OF THE ATLANTIC, to the British Association. Besides these he delivered many scientific and popular lectures for charitable purposes. The second volume of his MAGNETICAL INVESTIGATIONS appeared in June 1852. In 1853 he read four papers before the British Association, at Hull: 1. On the Surface Temperature and Great Currents of the North Atlantic and Northern Oceans; 2. On Railway Accidents by Collision, and Suggestions for their Prevention; 3. On the Popular Notion of an Open Polar Sea. Is it the Fact? and 4. On Deep Sea Soundings, and Errors therein from Stata-Currents, with Suggestions for their Investigation.

In September 1851, he received a severe injury by the fall of his horse occasioned by too suddenly turning a corner. Whilst prostrate in body by the hurt sustained in his leg, his mind was still actively engaged, as the following, from a letter to his sister, of 21st October indicates:—

“I now get daily into our upper drawing-room, or organ-room—a charming place—and, thank God, am wonderfully recovered, except the knee. It seems like a miracle. The foot, I hope, as it appears to be, will be quite right. About the recovery of the knee the doctor has good hopes; but we dare not try it, as one of the principal ligaments appears to have been quite broken. I keep it always in the same position, or nearly so. I have contrived a variety of machines and apparatus, to the as-

tonishment of the doctor. A carriage or couch which runs me from room to room, removes me in and out of bed, acts wonderfully ; a child can push me along. My leg is lifted for dressing with a tackle I made when a boy!"

In Torquay he devoted his time—apart from that employed in scientific studies—to the happiness and welfare of those who enjoyed his acquaintance. Of an affable and benevolent disposition, he rendered himself singularly approachable to all classes of society. He had the rare gift of accommodating his manner to the tastes of those in whose company he was thrown : he could be the minister, the sailor, or the man of science as circumstances required—he could be anything, in short, that was compatible with his Christian profession. With children he was pre-eminently a favourite ; he could entertain them for hours to their great delight, and without the least constraint on their part beyond that feeling of respect and reverence for him which frequently betrayed itself in most endearing expressions. He was esteemed by all. Though he had given up all thoughts of undertaking the charge of a parish or other endowed church, his concern for the souls of God's people was as lively as ever, and he never neglected an opportunity of speaking a word in season, or the exercise of his calling when circumstances required it. He frequently assisted the Rev. Mr. Wolfe, incumbent of Upton (Torquay) ; and in 1853 made an arrangement with him for a division of his labour. The plan of these disinterested and gratuitous services deserves mention. Dr. Scoresby offered to divide the services of Upton

Church with his friend, Mr. Wolfe, but this arrangement could not be entered upon without the sanction of the Bishop of Exeter, who, in his turn, says, "I cannot but estimate highly your liberal offer; but it is not in my power to accept you otherwise than as an *assistant* to Mr. Wolfe on his nomination in the usual manner, though without stipend." To this Dr. Scoresby readily assented, and subscribed the following terms: "Dr. Scoresby to take charge of the Sunday afternoon service in the manner and nature of a lectureship, without stipend; the assistant curate of Upton, so far as he conveniently may, assisting in the desk; but when not convenient, Dr. Scoresby to be responsible for the entire afternoon service."

The unbroken friendliness which existed between Mr. Wolfe and Dr. Scoresby during the whole period of this agreement rendered the arrangements mutually pleasing, as well as profitable both to themselves and their congregation.

CHAPTER XVI

MAGNETICAL INVESTIGATIONS.

(Various Years.)

IN treating of Dr Scoresby's scientific attainments, it is difficult to conjecture with any measure of exactness what, to the mind of the general reader, will constitute a fair exposition—whether it be necessary to do more than refer to his published works on MAGNETISM, or whether it be essential to enter largely into the history of his *Investigations*. Perhaps the best method of arriving at a just appreciation of his scientific labours will be to set out with the question—*What induced Dr. Scoresby, at the advanced age of sixty-five years, to undertake a voyage round the world?* And in order that we may thoroughly understand the circumstances which led to such an enterprise, we may add a few words in elucidation of the terms which we shall be called upon to understand, and of the elementary laws involved in the simplest description of magnetic phenomena.

At what period magnetism ($\mu\acute{\alpha}\gamma\eta\varsigma$, from magnesia in Asia Minor) was first discovered, it is impossible to determine; but that it has been known from time immemorial, in its *natural* state, is certain. The *loadstone* or natural magnet consists of an iron ore mixed with a certain proportion of quartz and alumina, and to this alone were the ancients indebted for their possession of mag-

netism, being unable to elicit it by artificial means. It was not until later, though still remote, times that the *directive* power of the loadstone became known, and that its application to pieces of iron had the effect of rendering them magnetic and available for the guidance of travellers. Dr. Gilbert, physician to Queen Elizabeth, published a work* in 1600, which greatly advanced the knowledge of magnetism, and since his time it has been elaborated by the researches of numerous philosophers into a science of the highest importance. Hid in the compass needle, it exercises its mysterious agency in guiding the traveller on his way, whilst by its subtile influence upon the telegraphic wire it outstrips him, and anticipates his arrival at his destination.

Magnetism, in common with several other subtile agencies, as electricity, light, heat, &c., with which it is closely allied, but not identical, exists, in a latent state, in all† material substances; but ferruginous bodies manifest it more distinctly than any other, so that in order to render our remarks as lucid as possible, and to prevent the necessity of multiplying words, we may confine ourselves to one or other of the forms of iron, in shape, for the sake of illustration, of a compass needle.

An unmagnetized needle—that is, a needle whose magnetism is quiescent, when suspended as in a compass, has

* *Physiologia Nova, seu Tractatus de Magnete et Corporibus Magneticis.*

† The theory of universal magnetism, which is due to Colomb, has been modified by the patient investigations of Dr. Faraday. In his inquiries, Dr. Faraday discovered that there are certain substances which do not place themselves in the direction of the polar axis, but at right angles to it; to these he gives the name *diamagnetic*; and reserves for those which do adopt the axial position, the term *paramagnetic*.

no tendency to direct its extremities one way more than another, whilst a magnetized needle so placed would tend to rest in a direction nearly north and south, in other words, in the plane of the magnetic meridian. In magnetizing a needle nothing is added to it, nothing is taken from it; its physical properties remain unaltered. In what, then, does the difference between these two needles consist? Dr. Scoresby illustrates the theory of magnetic development in the manner following. He supposed the altered condition of a magnetized substance to depend upon a change effected by the magnetizing agent upon the magnetisms of its ultimate molecules. Thus, to follow out his illustration, supposing the *unmagnetic* needle (N S) divided into molecules, having the axes of their latent magnetisms arranged in a transverse and irregular manner across the bar, as *n s*, then there would be no tendency at one point more than another of the needle to display magnetic influence, the molecular magnetisms destroying each other.

N. $\overset{\cdot}{\underset{\cdot}{\circ}}$ $\overset{\cdot}{\underset{\cdot}{\circ}}$ $\overset{\cdot}{\underset{\cdot}{\circ}}$ $\overset{\cdot}{\underset{\cdot}{\circ}}$ $\overset{\cdot}{\underset{\cdot}{\circ}}$ $\overset{\cdot}{\underset{\cdot}{\circ}}$ S.

But, supposing the *magnetic* needle to be so divided, the minute particles would no longer present their magnetic axes in a transverse or irregular manner, but in a direction tending towards the extremities of the needle, so that the magnetic force would not be equally distributed and neutralized, but would multiply towards the points.

N. "O" "O" "O" "O" "O" "O" S.

A magnetic needle, though presenting the same *physical*

characters as one in which the magnetism is latent, exhibits new *functional* properties.

1. It has the property of *attracting unmagnetized iron*. If a magnetic needle be placed among iron filings it will attract a quantity of them varying according to the power of the magnetism; the greatest weight of filings being attracted near the points, and diminishing towards the centre. Again, if a magnetic needle be placed near an unmagnetized needle suspended on a pivot, it will be found that either end of the former will attract both ends of the latter.

2. *It pursues a peculiar conduct when approximated to another magnetic needle*. If a magnetic needle be suspended by a thread or on a pivot, and the extremity of another (fixed) magnetic needle be brought near one of its ends, it will either turn towards it or flee from it, and in either case, the other end will pursue a directly opposite course when approached by the same end of the fixed magnetic needle; in other words, the presented pole or extremity of the fixed needle will *attract* the *opposite* pole of the moveable one, but will *repel* the *like* pole.

3. *Polarity*. In magnetism, as in electricity, two qualities must co-exist wherever it is developed, though they will separate as far from each other as the limits of the magnetized substance will allow. Thus, a magnetic needle is occupied by two distinct qualities of magnetism (commonly distinguished as northern and southern), the one resting in superlative force at one point, the other having its head-quarters at the opposite extremity, the strength of both diminishing equally towards the centre, where at one particular point they neutralize each other.

A needle so circumstanced is said to have *polarity*, the extreme ends being the *poles* (north* and south), the neutral point in the centre the *magnetic equator*, and a straight line extending from one pole to the other the *magnetic axis*.

4. *Induction* signifies the property which magnetic bodies possess of eliciting magnetism in other substances susceptible of its influence. For example, if an unmagnetized needle be swung upon a pivot, and the point of a fixed magnetic needle be presented to it, the latter will *attract* either end of the former; and this it does in virtue of its *inductive* power; for before it can attract the unmagnetized needle it must *induce* in that end of it to which it is approached a quality of magnetism *opposite* to that possessed by itself; so that if the *north* pole of the magnetic needle were presented it would induce southern polarity in the unmagnetized one, and these *opposite poles attract each other*. Contact is not essential to induction. A powerful magnet will induce magnetism in an unmagnetized substance at a considerable distance, even after the interposition of a non-magnetizable body. The law of the power of induction (with respect to distance) is that it diminishes, inversely, as the square of the distance; thus, supposing the inductive power at the distance of an inch to be one, then, at the distance of two inches the power would be reduced to one-fourth. The most elaborate method of *magnetization* is that discovered by Dr. Scoresby (Scoresby's

* Properly speaking, that extremity of the compass-needle which points to the *north* is, and should be called, the *south* pole; but by a conventional *reversion of terms* each end of the needle adopts the name of the pole towards which it directs itself.

method), and made known by him at the British Association meetings in 1844 and 1846; for a description of which, see *Association Reports, Magnetical Investigations, and Journal of a Voyage to Australia*.

Magnetism may be either *transient* or *residual*,* and it follows this law, that the more easily it is induced the more quickly it disappears after the removal of the magnetizing agent, and *vice versa*. Soft iron is most susceptible of magnetic induction; so much so, indeed, that if a bar of it be held perpendicularly (or, better, with its lower end inclined a little towards the north), it becomes magnetic by the inductive power of the earth's magnetism; and if a pocket compass be placed near one of its ends it will cause the needle to deviate; but the moment it is brought to the horizontal position, with its extremities directed east and west, its magnetism vanishes. Steel, or hard iron, on the other hand, is not easily influenced by magnetic induction; but when it is so affected (either by hammering, or by the employment of a powerful artificial magnet, or by the electro-galvanic battery), it does not readily yield its magnetism: it retains its magnetic influence for a long period by what is termed its *coercive force*.

Dr Scoresby employed his leisure time when navigating in the Arctic regions, in making himself acquainted with the causes of various natural phenomena which presented themselves in rapid succession. Meteorology was the favourite subject of his early voyages as Magnetism became of his latter. It was probably about the

* We speak only of two kinds at present; a third quality remains to be mentioned as we proceed.

year 1815 that he began to make a study of this science, from which period we will give a rapid sketch of his researches, confining ourselves mainly, however, to the consideration of terrestrially induced magnetism as leading us more directly to the consideration of his voyage round the world. It was during the voyages of 1815, 1816, and 1817, that his attention was arrested by certain anomalies in the direction assumed by the magnetic needle, which he described in an elaborate paper on the subject communicated, through Sir Joseph Banks, to the Royal Society of London, on the 4th of February, 1819. From his observations he was enabled to strengthen the conclusions arrived at by Captain Flinders, that these anomalies had been previously improperly attributed to imperfections in the azimuth compass, and that they ought rather to be ascribed to the influence of the iron employed in the construction of the ship. Of the iron thus made use of, he concluded that such portions as were placed perpendicularly had a tendency to become magnetic, having the south pole uppermost and the north pole at the nethermost extremity in the northern hemisphere and contrariwise in the southern; that the full magnetic influence of the iron distributed throughout the ship had a tendency to concentrate into a *focus of attraction* about the middle of the upper deck, somewhat nearer the stem than the stern, having the south pole at this spot and the north pole at the lower part of the vessel; and that this concentration of magnetic force was the cause of the variation in the compass needle, by attracting its north pole (in the northern hemisphere) and drawing it out of

the line of the true magnetic meridian. The changes in the variation of the compass needle with alteration in the dip of the needle ; the different parts of a vessel in which the anomaly is most and least observed ; the class of ship most liable to the anomaly, together with rules for calculating the variations of the compass, are discussed in the same paper ; and in that, his first, as in his last work on the subject, he urged the necessity for a compass high up the mast to keep it out of harm's way. "Hence," he says, "I have been in the habit of carrying a compass occasionally, in the crow's nest, fixed at the mast head, where it was found to be free from those anomalies which are so sensible in a compass on deck."

The peculiar influence exercised by the terrestrially induced magnetism, and especially the circumstance of its modification or neutralization by altering the position of the bars of iron in which it was developed, led Mr. Scoresby to construct an original instrument, which he called a *Magnetimeter*,* with a view of "determining the inclination of the magnetic needle by the observation of the *plane of no attraction* in the direction of the magnetic meridian." Whilst conducting experiments with this instrument, it occurred to him to try the effect of percussion on the bars of iron under manipulation, which gave surprising results, and led to further investigations of a singular character. Dr Gilbert, in the work we have mentioned, announced at that early period, that the effect of hammering iron, whilst placed in a north and

* Described and figured in the "Transactions of the Royal Society of Edinburgh," vol. ix., p. 248.

south position, was to develop magnetism; but no practical magnetical results from this kind of manipulation was made known until the publication of a paper by Mr. Scoresby, containing a description of the Magnetimeter. "This paper," he says,* "which was forwarded to the secretary, Dr. [Sir David] Brewster, for the Royal Society [Edinburgh], January 9th, 1821, comprises descriptions of the general phenomena resulting from terrestrially induced magnetism on small bars of iron and steel, as affected by changes of position, and as augmented, modified, or neutralized by *mechanical action*,—whether of hammering, scouring, filing, bending, &c., as also by electrical discharges and currents. It likewise includes the important result, derived from experiments made before the close of 1820, that '*hot iron*' receives more magnetism of position than the same when cold."

He continued his researches at every available opportunity. Another paper was read before the Royal Society of Edinburgh, on the 7th of March, 1822, in which further experiments on the development of magnetism by percussion were detailed; and a second paper was communicated, through Sir Joseph Banks, on the same subject, to the Royal Society of London, in 1823. The most elaborate investigations into this subject, however, were made during the voyage of 1822, to which we referred when relating the circumstances of the voyage; they seem to be so interesting that we may quote the description given of them by Mr. Scoresby in his JOURNAL:—

* "Magnetical Investigations," vol. ii., p. 121.

"Though a Greenland voyage," he says, "is perhaps one of the most arduous of all maritime adventures, the mind of the commander of a whale-ship being very rarely free from anxiety ; yet, like all other occupations at sea, it affords occasional intervals of absolute leisure, such as when the attention of the captain to the progress of the ship is not requisite, or when, in consequence of calms, contrary winds, or other obstructions, the main designs of the voyage cannot be pursued. The immovable state of the *Baffin* at this time, however irksome and productive of anxiety, was such as to render any exertion for our relief or extrication perfectly useless ; but this total suspension of ordinary duties gave time and opportunity for scientific researches. My attention, when thus unoccupied by the management of the ship, had for some time been employed in making preparations for experiments on an original mode of developing magnetism in steel, the application of which might occasionally prove of considerable importance at sea.

"The fundamental process is the elicitation of magnetic energy by percussion. For this purpose soft steel is employed, which is capable of retaining for some time the magnetic virtue developed in it, instead of iron in which it is extremely evanescent, or hard steel in which it is with great difficulty produced. The first step in the process is to hammer an iron or steel poker, or other rod of similar metal, of considerable size, while held in a vertical position, or, what is better, in the direction of the dipping needle, by a few smart blows on the end ; this will render the rod or poker sensibly magnetic. If a soft steel bar be now placed on the top of the poker, and

hammered on the upper end, while both the poker and the bar are held vertically, or in the direction the dipping needle assumes, it immediately acquires a considerable attractive force, the upper end becoming a south pole, and the lower end a north pole.

“A cylindrical bar of soft steel, $6\frac{1}{2}$ inches long, a quarter of an inch in diameter, and 592 grains in weight, thus treated, acquired, in one instance, a lifting power of about 40 grains by a single blow with a hammer weighing 12 ounces; and after ten blows (part of them given with a hammer a little larger), it lifted a nail weighing 188 grains! But a still more extraordinary effect was obtained by the use of steel-wire. A piece of a knitting-needle, three inches in length, and weighing 28 grains, which was proved to be without any magnetic virtue whatever before the experiment, on being repeatedly hammered when held vertically on the top of a kitchen poker, lifted a nail 54 grains, or very nearly twice its own weight! This singular production of magnetism is in a great measure owing to the use of the rod of iron, the polarity of which, after hammering, greatly aids the development of magnetism in the steel; for the highest effect obtained by hammering the larger steel-bar, when held vertically upon stone, pewter, brass, &c., instead of iron, was only a lifting power of $6\frac{1}{2}$ grains.

“Such a high degree of magnetic energy being obtained by a process so simple, it suggested a ready means of making magnets, without the use of any magnetized substance whatever, and of giving polarity to needles, so as to render them capable of answering the purpose of

compasses in an instant. This application of the process induces me to be more explicit on this incidental subject, because of its importance to seafaring persons. There are instances on record of the compasses of ships being spoiled by lightning: this process would enable the navigator to restore sufficient polarity for the guidance of his ship in a few seconds. And, in cases of vessels foundering at sea, or being destroyed by fire or lightning, in which the crew are compelled to take refuge in the boats at a moment's warning, and without having time to secure a compass (a case which has occurred hundreds of times), the same process might enable the distressed voyagers to give polarity to the blade of a penknife, or the limb of a pair of scissors, or even to an iron nail, which would probably be sufficient, when suspended by a thread, to guide them in their course through their perilous navigation.

"Being desirous of applying the process to the construction of powerful artificial magnets, I prepared (with the assistance of the armourer on board) six bars of soft steel, and bars properly tempered, suitable for a large compound magnet. The soft steel bars were nearly eight inches long, half an inch broad, and a sixth of an inch thick. The bars for the compound magnet, seven in number, which were of the horse-shoe form, were each two feet long before they were curved, and eleven inches from the crown to the end, when finished, one inch broad and three-eighths thick. These bars were combined by three pins passing through the whole, and screwing into the last; and any number of them could be united into

one magnet by means of a spare set of pins screwed throughout their length, and furnished with nuts. In addition to these bars, &c., I provided separate feeders or conductors of soft iron, suitable for connecting the poles of each of the bars of the compound magnet, and also another conductor, fitted to the whole when combined. With this apparatus I proceeded to give the magnetic virtue as follows:—

“I took a rod of soft steel, which I considered better than a poker, and hammered it for a minute or two, while held vertically upon a large bar of soft iron in the same position. This gave considerable magnetism to the steel rod. On the top of this I then hammered each of the six bars of soft steel, until the accession of lifting power ceased. Then fixing two of them on a board, with their different poles opposite, and formed by a feeder at each end into a parallelogram, I rubbed these, after the manner of Canton, by means of the other four bars, and found their magnetism greatly augmented. The other four bars were operated upon in pairs in a similar way, those already strengthened being used for strengthening the others, and each pair being successively charged, until all the bars were found to be magnetized to saturation. A pair of them now possessed a lifting power of two pounds and a half.

“The next step was to touch the bars intended for the compound magnet by means of these six bars now magnetized. For this purpose the six bars were combined into two magnets, by tying three of them together with similar poles in contact; these two were then placed,

with opposite poles, in connection, and tied together at one end, but separated about the third of an inch at the other, so as to form one compound magnet, and a conductor was kept constantly applied to the open end of it when not in use, to preserve the power from being lost. One of the bars of the horse-shoe magnet, with a conductor across the poles, was now placed on a board, in a groove cut out so as to hold it fast under the operation. The straight bar magnet was then placed erect on the middle of it, with the separated poles downward, and rubbed against the horse-shoe bar from the middle to one of its poles, until the north pole of the one was in connection with the pole intended to become the south of the other; from thence it was rubbed back again, with the south pole of the magnet in advance, as far as the other extremity, or that intended for the north pole of the horse-shoe bar. Two or three strokes of this kind being made from end to end of the bar on each side of it, the north and south poles of the magnet being always directed to the south and north poles of the bar respectively, the magnet was slipped sideways off when at the pole of the bar, and the bar was found to have acquired such a magnetic power as to enable it to sustain a weight of several ounces, hung from the conductor. All the bars of the horse-shoe magnet were treated this way in succession. The first five bars of the magnet being then combined by the screws, were employed in the same way as the soft steel magnet had been used for increasing the power of the sixth and seventh bars, by which they were rendered capable of carrying above two pounds weight

each. These were then substituted in the combined magnet for the fourth and fifth bars, while the latter underwent the touch of the other five in combination ; and, in their turn, the second and third, and then the seventh and first, were subjected to a similar treatment. After these operations, which occupied forty-three minutes, the compound magnet, with all the seven bars in connection, lifted ten pounds. After a second series of the same kind of manipulations, five of the bars in combination carried fifteen pounds ; and, after a third series, eighteen pounds ; but as, on trying a fifth series, little augmentation took place, the process was discontinued. The whole of the operations from beginning to end occupied above four hours ; but, as I generally rubbed each bar with twelve strokes on each side instead of one or two, which I afterwards found sufficient, and in other parts of the process spent a great deal of time and labour which turned to no account, I doubt not but that the whole might have been completed, beginning without the smallest perceptible magnetism, and ending with a lifting power of twenty or thirty pounds, in a space of two hours or less.

“As steel does not receive, immediately on being touched, the full degree of magnetic energy of which it is susceptible, a conductor was applied to the magnet now formed ; and it was laid aside, with the view of augmenting its power on a subsequent occasion.”

In after years, when employed in a widely different sphere of labour, Dr. Scoresby continued to pursue his

magnetic researches with unabated zeal. His labours were, however, for a long period confined to "experimental inquiries concerning the circumstances affecting the magnetic powers of steel and cast iron, and the laws and principles by which these powers are governed," involving a series of investigations of a nature so continuous and progressive as to prevent our treating of them here. It will afford a sufficient idea of his energy and perseverance to quote the following passage from the preface to the first volume of his *Magnetical Investigations*:—

"It is hardly needful to say," he remarks, "that the researches have been of a very elaborate nature and extent. The tables given in this volume alone are the result of above five thousand observations on the deviations produced by the numerous magnetical plates and bars subjected to experiment, each observation requiring the needle of a five-inch compass, after being disturbed by the influence of the magnet to be tested, to attain a stationary position, and the angle of deviation from the magnetic meridian to be read off within a minute or two of a degree. And, besides this labour by the method of deviations, a large number of magnetical bars of the horse-shoe form, &c., had to be otherwise tested; and the results obtained by the different modes of experiment required to be tabulated, in many cases at a considerable addition of trouble, for reducing the observations, and for obtaining the exact measures and weights of the bars or plates employed."

As this volume was published in 1844, it is obvious that a large portion of the investigations must have been made during his sojourn in Bradford.

Before hastening to the consideration of the important question of *magnetism in iron ships*, there is one other circumstance in connection with his discoveries in magnetism which it is right to mention. Most of the experiments referred to in the above quotation were made with a view of obtaining greater excellence in the *directive force*, as well as in the *permanency of power* of the magnetic needles used on shipboard; and great success attended these investigations, the first practical result of which was made known to the British Association at its meeting in 1836. The nature of Dr. Scoresby's *improvements* in the compass needle, and of his communications with the Admiralty, are concisely stated in the first part of his *Voyage [to Australia] for Magnetical Research*, from which the following is taken. Speaking of his improved compass needle, exhibited to the British Association in 1836, he says:—

“This experimental bar consisted of four thin plates of cast steel, tempered or hardened equally from end to end, which were placed nearly parallel to each other, rather closer at the ends, but not in contact, spaces of about a quarter of an inch, by which a higher degree of power was secured, being produced by the interposition of discs of wood betwixt the several plates. For convenience of construction, the plates were pierced correspondingly with four small holes, one near each extremity,

and two an inch and a half apart, near the centre. Small brass pins, passing through the several sets of holes, and through the intermediate pieces of wood, afforded, by screw-nuts at the points, the means of ready and secure combination. The needle, as thus made up, was fitted with an agate and pivot, and also with the means of suspension by silk fibres, so as to traverse edge upwards. The gain of power over any previous instrument of corresponding dimensions and weight was found to be great and decided, with a still more unusual permanency of the magnetic energy.

“General character of compass needles previously in use.—Previous to the time of the construction of the instrument just described, the needles in ordinary use were excessively defective in qualities the most important for the real effectiveness and durability of action of the compass. They were generally weak and unenduring, whilst those supplied for the Royal Navy were, I believe, amongst the worst of their kind. I had tried and tested (about this period of time) a very considerable number of compass needles, by various makers; few were moderately good; not a few were *intolerably bad*. Nine needles were furnished me by the late Captain Johnson, R.N., in 1839, as fair specimens of those then in use in the navy; some of these as to mere directive force were tolerable of their kinds; two out of four, by one of the accredited makers for the Admiralty, were utterly incapable of performing their intended function. Compared with needles constructed on the principles described above, all those which I had an opportunity of trying were

singularly inferior. Weight for weight (compared with needles of similar length), my compound edge-plate needles exceeded the others in the proportion of $2\frac{1}{2}$ to 1, in the best of those supplied to me as specimens, and about 5 to 1 in the worst; whilst as to *fixity of power*, the superiority of mine scarcely admitted of a comparison. For under the action of a very trying and damaging test [vide op. cit. art. 60.], which my needles could sustain with so trifling a loss, as to leave them still in possession of about double the power. of which any of the others were susceptible,—the others lost, without exception, the entirety of their original polarity. . . . It should be noticed that the compasses of the Royal Navy, which before the year 1836 were characteristically among the worst in use, are now as decidedly the best. The principles which I have described as working so admirably towards the improvements of magnets and magnetical combinations are now generally adopted in the construction of compasses for ships in the public service. The ‘Admiralty Compasses’ have their directing magnets in the form of thin steel plates (two or four in combination), hardened throughout, and set on edge, and arranged in parallel series, generally two combinations of plates on each side of centre, I believe, beneath the card.”*

* In a sketch of Dr. Scoresby's career, published at the time of his death, in *The Yorkshire Gazette* of April 4th, 1857, the following passage occurs:—

“It is not too much to say that no man ever did more, few, indeed, so much, for this important science, as connected with navigation. The ‘Admiralty Compass,’ as it is called, which is used in the navy, ought to be called the Scoresby Compass, for it was brought to its present state of perfection by the late doctor. Of that there is no doubt,—the letters in his possession abundantly prove that fact; but the Government never did him the justice to acknowledge it. I have been informed that when Dr. Scoresby first communicated with the Admiralty

At a period when the quantity of iron made use of in the construction of ships was of inconsiderable amount, as compared with the vast masses now employed, its magnetism as a cause of compass deviation excited but little attention, and it was not until Captain Flinders, Mr. Bain (of the Royal Navy), Mr. Scoresby, and a few other intelligent scientific navigators began, in the early part of the present century, to investigate the anomalies in the directing power of the needle, that the subject received any serious attention ; and not even for many years after that was it considered of paramount importance by the generality of sea-faring men. The experiments made in the Polar Seas by Mr. Scoresby in his voyages of 1818 and 1819, whereby he discovered that the magnetism developed by terrestrial induction could be "increased, inverted, or neutralized at will, by *mechanical violence*, such as hammering, bending, twisting, folding, &c., or even by simple vibration," led to the promulgation of a new theory respecting the permanency and stability of magnetic force. Hitherto but two kinds of magnetism—with reference to *durability*—were recognised ; the *Transient*, or that which vanishes soon after the withdrawal of the magnetizing agent ; and the *Permanent*, or that which continues to reside in the magnetized sub-

on the subject, some protégé of the Board had an instrument before their lordships, with which they were trying experiments. It failed, and then Dr. Scoresby was sent for. He was for some months in constant attendance at the Admiralty, or with some of the Lords, at one or other of our seaports, explaining and testing his theory. His instrument was completely successful, was adopted in the navy, and is now in use on board all her Majesty's ships ; but the unsuccessful protégé of the Board had influence enough to prevent the inventor's name from being given to it ; and it is called 'The Admiralty's' instead."

stance independent of the magnet by which it was developed. But Dr. Scoresby was led by his investigations to infer a third kind, occupying a position, as to its durability, midway between the two former, and to this he gave the name of *Retentive*. "On this feature in iron," Mr. Archibald Smith says,* "Dr. Scoresby strongly insisted, and to him is principally due what we know of iron in this state."† The class of iron most liable to this form of magnetism is precisely that employed in the construction of iron ships. As in its magnetism it is midway between the extremes of transient and permanent, so in its texture it is midway between *soft* and *hard*, having in the manufacturing process acquired a certain hardness (though not equal to *hard* iron) sufficient, under favourable circumstances, for the *retention* of the magnetism developed in it by the hammering, bending, &c., to which it is subjected during the building of the ship, but insufficient for its stability on other occasions. Seeing that the polarity in bars of iron of such texture could so easily, by mere mechanical violence, be made to change, Dr. Scoresby applied his discovery to the case of iron ships, believing that a vessel constructed of such material would present a large quantity of this *unfixed* retentive magnetism, and that the original distribution of her magnetic lines being dependent upon the locality and position in which she was built, would be liable, under certain circumstances, to sudden changes, whereby a dangerous influence must be exerted upon the compass

* "Voyage for Magnetical Research."

+ On this subject, see *Athenæum*, November 12, 1859.

needle, uncontrollable by any of the methods, however ingenious, which had been proposed, and were then in use, for the correction of compass errors.

"If the ship's magnetism, indeed," Dr. Scoresby wrote,* "consisted merely of the transient and mobile quality of terrestrial induction, then had Mr. Barlow's elegant and scientific application of the correcting iron plate provided for everything essentially needed for safe navigation. Or if the ship's magnetism had consisted truly of *two qualities*, only,—that terrestrially induced, and that usually denominated fixed or permanent,—the method of Mr. Airy of combining a mass of malleable iron, for the neutralizing of the former, with permanent bar-magnets for the correction of the latter, might, in ordinary cases, have proved as effective as the device was scientific and beautiful."

But for as much as the deviation caused by the retentive magnetism is not a *fixed quantity*, so no fixed counteracting influence can be brought to bear upon it. Desirous of testing his theory by experimental inquiry, Dr. Scoresby went to Liverpool in September 1854, where he received much kindness and every facility for promoting his investigations on board iron ships then building. Yet there were some who thought it dangerous to promulgate views calculated to impress the public with a distrust of that class of vessel. *The Times*, however, showed the fallacy of their reasoning, in an article on the

* "Magnetical Investigations," vol. ii., p. 242.

27th September 1854, from which we quote. Speaking of the previous meeting of the British Association, it says:—

“As for the contents of the mass of papers contributed to the different sections, descriptions of scientific discoveries of any absorbing interest will be looked for in vain, but in more than one instance the course of inquiry has taken a practical direction, from which the best results may be anticipated. Such, for example, are the researches of Dr. Scoresby into the causes of the variation of the compass in iron ships, and the principles upon which vessels composed of this material may be safely navigated. The Rev. Dr. Scoresby asserts that the action of the compass in such ships is liable to be disturbed by influences not calculated for or met in the system of compass correction now in use. Something approaching to indignation has been manifested at this enunciation in Liverpool, above all places in the world, of a theory which, it is said, will tend to bring iron ships into disrepute, and which has already produced a fluttering among the merchants on 'Change. It is denied that the casualties among iron ships are larger in proportion than those occurring to wooden vessels, and it is alleged that the local attraction arising from the former material can be satisfactorily corrected by known methods of compass adjustment. Without attempting to enter into the merits of the question, upon which it will be enough to say that there exists a difference of opinion among practical men, it seems impossible that any harm can come of the thorough investigation of a subject so important and

difficult. If the danger pointed out by Dr. Scoresby does exist, neither the shipowners of Liverpool, nor those of other ports, can do any earthly good by blinking the question, nor is it to be supposed that, as a body, they desire to do so. Then, again, Dr. Scoresby's opinions cannot be ignored by a half-contemptuous rejoinder, that he suggests no very distinct remedy for the dangers he has taken so much trouble to expose. In order to know how to meet a danger, we must know in what it consists. As with social and individual, so with scientific shortcomings—they must be well defined and understood before they can be amended. It is in this spirit—a spirit of patient inquiry, coupled with a careful sifting of facts—that Dr. Scoresby seems to have approached the subject of the compass action in iron ships, and it is in this spirit also that the British Association will best devote itself to, and aid in the promotion of, science in every one of its departments.”

The leading propositions to which Dr. Scoresby sought confirmation by his experiments were these:—

1. “That ships built of iron must not only be strongly magnetic, because of the vast body of this metal which is subjected to the action of terrestrial induction, but that by reason of the elaborate system of hammering, as well as from the bending of plates and bars during the progress of construction, there must be an *extremely high* development of the quality of *retentive magnetism*.”*

* “Magnetical Investigations,” vol. ii. p. 331.

2. "That each iron ship has a special individuality of the magnetic distribution, depending essentially on the position of the keel and head whilst building." *

Dr. Scoresby explained this proposition by means of the annexed illustration† (Diagram I.), which represents four vessels built in England with their heads directed towards the four cardinal points S. E. W. N. (Figs. 1, 2, 3, 4), respectively. Here the difference of colour distinguishes what we have before mentioned as the two different qualities of magnetism which must necessarily co-exist wherever magnetism is developed. The dotted line (E. Q.) in each figure represents the *equatorial plane* of the ship's magnetism,—what in our illustration of the magnetic needle we called *the neutral point in the centre*—or (with reference to Dr. Scoresby's experiment) *the line of no deviation*: it defines the line of separation between the northern (white) and southern (shaded) polarity.

The vertical line represents the *magnetic axis*. The manner in which the experiment was conducted is described in Dr. Traill's letter; it is obvious that when the compass which was suspended over the ship's side was fairly over the white or shaded part of the vessel, it would, by a corresponding deviation of the needle, manifest which quality of magnetism resided there, and that where neither one quality nor the other was indicated (as would

* "Magnetical Investigations," vol. ii. p. 332.

† "Cut in wood in 1851; some three to four years before experimental determinations of the actual facts."—*Illustrations of Magnetism of Iron Ships*. Torquay, 1856.

be the case all along the dotted line) was the equatorial plane.

DIAGRAM I.*

Theoretic Magnetical Condition of Iron Ships previous to being launched, as built in ENGLAND, under an Inclination of the needle of 68° to 70° N.

Fig. 1. Head S.

Fig. 2. Head E.

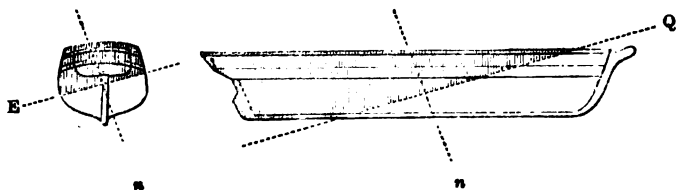
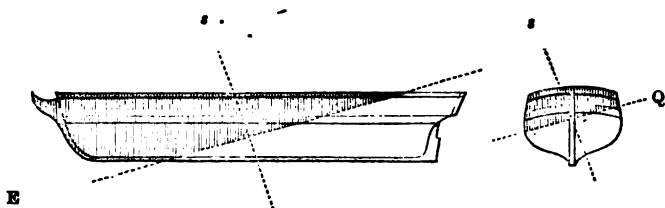


Fig. 3. Head W.

Fig. 4. Head N.

EXPLANATION.—The axial line, s , in each figure, represents the direction of the Dip or Terrestrial Magnetic force, as passing through the general centre of gravity of the material of the ship. All the substance below the equatorial line, E Q, (white) has northern polarity; all above it (shaded) southern.

* These diagrams are copied from a set published for Dr. Scoresby by R. Cockram, 10 Strand, Torquay, on the 1st of January 1856; but the woodcuts were made several years previously. They do not pretend to more than a *proximate* representation of the magnetic lines; for, as Dr. Scoresby foretold in the second volume of his "Investigations," "the occasional large masses of iron inside, such as beam ends, stringers, bulk heads, &c., exert a modifying action on the general uniformity of the lines."

Comparing the above illustration (Diagram I.) with the following (Diagram II.), representing ships built in Australia, we observe that the shaded or southern polarity which was uppermost in the former is now nethermost, the white or northern polarity in the latter having the ascendancy. The first represents ships built under a

DIAGRAM II.

Theoretic Magnetical Condition of Iron Ships, previous to being launched, supposed to be built in Southern AUSTRALIA, or TASMANIA, under a Dip of the Needle of about 67° to 70° S.

Fig. 1. Head N.

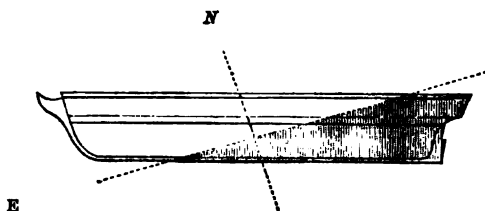


Fig. 2. Head W.

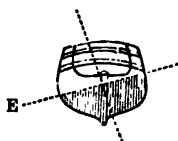
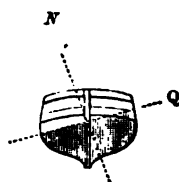


Fig. 3. Head E.

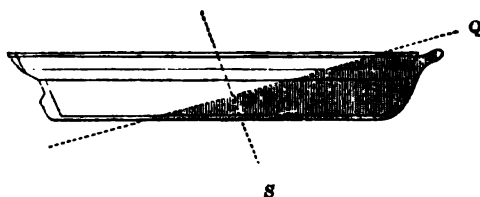


Fig. 4. Head S.

EXPLANATION.—White, *Northern* polarity; that is, a polarity repelling the north end of the needle. Shaded, *Southern* polarity, attracting the north end of the needle.

northern dip of about 68° to 70° —the latter those built under a southern dip of about 67° to 70° ; it is apparent

therefore, that vessels trading from one hemisphere to the other must undergo a remarkable magnetic change. Of course, in order to have symmetrical magnetic lines, as in the two sets of diagrams annexed, the corresponding vessels of the two hemispheres must have been built with their heads in opposite directions. It is also manifest that a vessel, built with her head, say, to the north, (having had her magnetism developed by terrestrial induction whilst in that direction), must be contravening the laws of magnetism whenever she turns her head in any other direction without changing her magnetic lines so as constantly to correspond with terrestrial polarity ; yet she may do so if it be accomplished quietly, as in *swinging* where no great straining is suffered ; but in all cases where she encounters violent shocks whilst her magnetic distribution is not in correspondence with the earth's polarity, there must be a magnetic change. But we are anticipating. The following letter from Professor Traill to Dr. Scoresby describes the nature and results of his experiments in Liverpool :—

“ WOODLANDS, near Liverpool,

“ October 18th, 1854.

“ MY DEAR SCORESBY,—Satisfied of the correctness of the principles you laid down in your late communications to the meetings of the British Association on the Magnetism of Iron built Ships, and the circumstances by which it is liable to be altered, I witnessed with much interest the simple and conclusive experiments by which you illustrated your theoretic deductions ; and I listened

with great pleasure to the lecture which, at their request, you gave to the underwriters of this great port, when you pointed out how the deviations of the compass in the recent valuable application of iron to the construction of ships, could best be corrected, so as to navigate them with all possible security.

“Your own discovery (made many years ago) of the high degrees of magnetism which might be developed, even in malleable iron, by percussion, bending, or twisting, rendered it certain that the innumerable blows by which some thousand pieces of iron are riveted together in the construction of a large ship would excite a high degree of magnetism, especially in the upright pieces of the frame.

“Your experiments, and the known laws of magnetism led to the conclusion, that such a ship would have the intensity and directive influence of her magnetism very different in different parts of the structure; and you predicted that there would be points, externally, in which her local attraction would cease to cause deflection of the needle—which points would lie in or near the magnetic equator. You also stated that these *points of no-deviation* would be found in different parts of the vessel, according to the point of the compass in which her head lay when building; and I was anxious to witness some of the experiments you were making on various iron ships, now here on the stocks. It was, therefore, with great pleasure, that I was yesterday enabled to assist in the experiments you were making in some of the building yards of this town.

“The vessel pitched on was a large iron ship in the yard of Messrs. Jones and Getty, nearly finished. This ship was in favourable circumstances for such a purpose; she was the only vessel in the yard; the timber top-rail was in its place; she stood on the stocks with her head exactly E.N.E. A good mariner's compass placed on a board, was let down along the outside from the top-rail to the required height below it, and kept by the board at 24 inches from the ship's side. We began on the *larboard side* to ascertain the point of no deviation, and then tried the same on the *starboard side*—the distance between the two points at the ship's main breadth being 36 feet 6 inches. I carefully noted down the result of each experiment.

“From this it will appear that, on the larboard side, the point of no-deviation was just 6 feet 6 inches below the top-rail, while on the starboard side it had dropped down to 18 feet below the rail—showing a dip of 11 feet 6 inches in 36 feet 6 inches. This remarkable accordance of fact with your theoretic induction is most satisfactory, and I congratulate you on it; though it did not surprise me, knowing well the accuracy of your experimental researches on magnetism, and the cautious manner in which you form your conclusions.

“Allow me also to express my opinion of the obligations all who are interested in the navigation of iron ships are under to you, for pointing out the circumstances chiefly to be attended to in the secure sailing of such vessels. An erroneous idea seems to have prevailed here that you deprecated the employment of iron ships. You

did no such thing. I heard you distinctly avow the value and importance of them to commerce, and your belief that they might be safely navigated, with due precautions; and I was struck with the clear manner in which you showed how this was to be done.

“ 1. You showed that the local attraction of the iron ship was not a *fixed quantity*, but was liable to be altered in intensity and direction by incidents inseparable from Navigation—as the course of the voyage, and the series of concussions a vessel may receive from a heavy sea.

“ 2. That the ship's effect on the compasses could not be permanently corrected by fixed magnets, on the principle now generally employed, because it was liable to alteration from the causes already mentioned. Therefore undue confidence in such *correction* might lead to serious error.

“ 3. That when tables of the deviation of the compasses in each ship are obtained, we must, as often as possible, verify them by careful azimuths and amplitudes, and other celestial observations, which will require greater attention of master mariners than in wooden ships; but with that attention may afford equal security.

“ 4. You further pointed out that the best position in an iron ship for what may be called a *correcting compass*, would be the mizen-mast head, especially if she be a steamer; as furthest from the influence of the funnel, and other disturbing causes. For wooden vessels the main-mast would be as good a position to obviate the local attraction of such a ship; and you illustrated this last

observation by stating, that you laid down the east coast of Greenland to an extent of 600 or 700 miles of coast line by a compass on the main-mast of the *Baffin* in 1822; and that your observations of the positions of lands, within range of determination, and in many cases of points and islands, if I recollect right, even 25 up to 40 miles distant, were found perfectly correct by Captain Clavering, who was sent out in the following year, expressly to explore the northern regions.

"Pardon me, my dear friend, for thus intruding my remarks on a subject you know so much better than I do; but it will show you the interest felt in your researches.—By yours faithfully,

"THOMAS STEWART TRAILL."

"Rev. Dr. Scoresby, D.D., &c., &c."

The remaining propositions, which could only be verified by accompanying the vessel on a long voyage, were these:—

4. "That the greatest changes in the magnetic condition are likely to take place in *new ships*; but that *all* iron ships must be liable, under certain circumstances of weather or alterations in their voyages, especially in going into southern latitudes, to have their magnetism and compass-deviation changed."

5. "That among the circumstances in which changes in a ship's magnetism are likely to occur, may be specified the following:—

"(1). In *new ships* when first encountering severe

straining or rolling by the sea. (2). In ships generally if following a new voyage. (3). In ships long running on one course, and then suddenly changing their course. (4). On heavy weather first occurring after a great change of latitude and long continuance of pretty smooth water. (5). A stroke of lightning on the ship. (6). On the ship being unequally heated in her hull, by the sun above, or by sudden changes of temperature of the sea below, &c.*

6. "The changes taking place in a ship's magnetic condition, will generally, but not always, change the compass-deviation."

7. "That among the modes of mechanical violence liable to produce and accelerate changes in a ship's magnetism, we may specify the following: The rolling, pitching, and straining of a ship in heavy seas; the stroke of a sea; or even the ordinary vibratory action of the engines on steam propelled vessels."†

As to a remedy for the compass deviations, Dr. Scoresby mainly relied throughout on a COMPASS ALOFT. *Adjustment of the compass by fixed magnets* he believed to be not only, in most instances, useless, but (especially in cases of vessels going into the opposite hemisphere) even extremely hazardous, because of the mutability of the retentive magnetism; and, though less objectionable, he regarded *Deviation Tables* and *Compensating Compass Cards* as not by any means of themselves trustworthy. He did not object to any of these, however, as part of the

* "Magnetical Investigations," pp. 281-343; and 407-432.

† "Magnetical Investigations," vol. ii. pp. 332, 342, &c.

compass arrangement—his desire being that they should be made as complete as possible—but that for the safe guidance of the ship there should be A STANDARD COMPASS ALOFT; a compass which, being out of reach of the ship's local attraction, might be frequently consulted.

That the foregoing sketch of Dr. Scoresby's attainments in the science of magnetism—comprehending the vexed question of the compass in iron ships—must be very imperfect is obvious from its brevity. To those who desire a more intimate knowledge of the subject, we must recommend a perusal of his published works from which we have quoted; more especially we would refer to his posthumous work, edited by Archibald Smith, Esq., M.A., "Journal of a Voyage to Australia," in which the subject is fully discussed.

CHAPTER XVII.

VOYAGE TO AUSTRALIA FOR MAGNETIC RESEARCH—HIS RETURN TO ENGLAND
—VISIT TO WHITBY—COURSE OF LECTURES AT EDINBURGH—HIS LAST
ILLNESS AND DEATH.

1855-1857.

A PROFOUND conviction of the high importance of those principles in magnetism which he had lately enunciated to the scientific world, and a desire to confirm by irrefragable evidence the truth of his views respecting the dangerous mutability of the magnetism in iron ships, as proven by practical observations, induced Dr. Scoresby to forego, at the age of sixty-five, the comforts and quiet of a well-appointed home, and to undertake a long and weary voyage round the world. He felt that although there was a manifest acknowledgment by the public of the truth of his assertions, yet in order to substantiate his theory, and place it beyond the power of any one, whether impelled by scepticism or the less worthy motive of self interest, to subvert it, there was still wanting the conclusive argument of personal experience, which could only be acquired by careful observations made on board a vessel proceeding, under a variety of circumstances, from one hemisphere to the other. His health was not good; but he even persuaded himself that a sea voyage would be beneficial to him, forgetting, in the earnest pleadings of his philanthropic heart, that for the questionable benefit

of a sea breeze he must barter a thousand amenities such as his habits and time of life required. He saw it to be his duty, however, to make the attempt, and wrote as follows to his friend Mr. Rathbone :—

“ GROSSEPOINT, near York, August 25th, 1855.

“ DEAR MR. RATHBONE,—As I have already received important aid in my investigations about the *magnetism of iron ships* from you and Mr. Philip Rathbone, I am led to trouble you further on the same subject, with a project in which I feel sure you will aid me if you can.

“ However my expositions may at first have occasioned distrust, objection, or alarm, the results, I have now every reason to know, have already been largely beneficial. I believe no intelligent captain will now be found, especially in a ship not well tried, who will trust his compasses in an iron ship as being safely to be relied on ; nor will it be long before the compass aloft will become a general arrangement for reference, the astronomer-royal himself having now proposed this very plan (suggested in my voyage to Greenland in 1822) for the re-adjustment of the magnets on his method of correction ; and Lieutenant Maury, U. S. Navy, having, on reading the discussions at Liverpool on the subject of my paper to the British Association, at its meeting there, recommended the same thing when writing to the underwriters of New York. My position has obtained the highest supports, and can, as I am prepared to show, be demonstrably vindicated ; and so that a compass duly placed aloft may be safely referred to, and (if corrected by a table of deviations

where needful) safely relied on. It can be proved that such a compass will be free from two grand sources of error: that by heeling, which all admit, and that from sudden changes in the ship's magnetic condition. The more the subject has been investigated, the more is the theory I have so long sought to elucidate and apply to practical navigation confirmed. I have now a paper in the hands of the editor of a London periodical (*The Mercantile Marine Magazine*), in which some thirty propositions previously drawn from theoretic and experimental grounds, and for the most part published several years ago, have obtained the most conclusive and beautiful verifications. As to changes I have always felt sure I could not be mistaken; but as to the quantity of such changes, or the frequency they may be dangerous, I have been greatly mistaken and misrepresented by others. But when distinguished men (for science) deny such changes to be possible, with crowds of facts against them, it is impossible to meet them without appearing to give too much prominence to the actual cases and facts which have already come to light. These, indeed, have multiplied on my hands by visits to Newcastle and Plymouth, where the subject was cordially entered into by builders and owners of iron ships, and every information frankly given.

"The above statement it may perhaps be desirable to confirm by an extract from my 'Magnetical Investigations,' vol. ii, pp. 289-290, as that portion of the work was printed off, I believe, in 1851, having been published in 1852. 'How far these changes' in the ship's magnet-

ism, 'under the more influential forms of mechanical violence may be thorough and complete, or to what extent they may act on the compass directions, or be discernible by ordinary observations, it would be presumptuous and vain to attempt to predict. For the tendency to change, and for the presumption of considerable and important changes, we mainly contend. The quantity of approximation in the ship's magnetisms to the earth's inductive action, under any of the conditions referred to' (that is, change of latitude and hemisphere, change of course and voyage, and encountering of gales of wind, &c.), 'is a question which observation and experiment on the actual cases can alone determine.'

"Now, it is for the determination of the actual cases under the changes of condition above indicated, that I am induced to trouble you with this long letter, and to submit to you the project I have for some time had in contemplation.

"My project is, if I can find a suitable iron ship of a first-rate or good class, either sailing or steaming, voyaging to Australia (or New Zealand), and if with the owners of such ship I could make a favourable arrangement so as to put me to little cost (for I have already spent many hundreds in this branch of the public service), I am disposed, God willing, to undertake such a voyage, in order to verify and complete the investigations I have been so long pursuing, on the important national object of the compass-action in iron ships.

"No scientific investigations from these regions, as far as I am aware, have yet come before the public which

can serve any useful end, but only enough to show that the freaks of the compass in high southern latitudes are as perplexing as they are dangerous. A voyage to Australia, where the earth's magnetic force is *inverted*, and where the south end of the needle *dips* about the same extent as the north end with us, would no doubt afford the means of making the most valuable experiments and observations, and gaining a species of information which could not fail to place our iron shipping in a very superior condition as to safety and public confidence. This service I am disposed to undertake, whatever sacrifice of private comfort and domestic privileges might necessarily attach to it.

"You know me too well to suppose I would in any way attempt to interfere with captain or officers, but only to have it arranged that facilities should be given for experiments and observations whenever it may be consistent, or not interfere with the ship's duties and the progress or despatch of the voyage. And on my part, it would be my special object and desire to give information to the captain and officers on subjects most deeply concerning their profession, as far as opportunity or disposition on their part might admit.

"The requirements I contemplate are: a large or first-class iron ship for Australia, to return without much delay; without iron masts; with some reasonable arrangements for compass aloft; and such appliances of azimuth compass, and previous swinging of the ship for determining the state of the compasses, as a prudent management might demand. The time of sailing should be October,

November, or December, and I should require the use of a small separate berth, and the consent and approval of the captain.

"Will you, as early as you can, obtain for me the information: 1st. Whether any such ship as I require may be had? 2d. Whether a notion could be obtained as to the probability of the plan being made available?—
Very faithfully yours, W. S."

Mr. Rathbone happening to be from home, the letter was given to the chairman of the Liverpool Shipowners' Association—S. R. Graves, Esq.—by whose instrumentality preliminaries were speedily arranged. A splendid new iron screw steamer, the *Royal Charter*, belonging to the *Liverpool and Australian Steam Navigation Company*, a vessel of three thousand tons, with the precise fittings named by Dr. Scoresby, was expected to sail about the time he had expressed. The directors, upon Mr. Graves' application, immediately expressed their willingness to present Dr. Scoresby with a free passage in their vessel, both on the outward and homeward voyage. And in order to secure to him the ease and privacy of a separate cabin, a sum was subscribed by the members of the "Liverpool Compass Committee," the "Shipowners' Association," and the "Underwriters' Association," sufficient to defray all extra expenses, including accommodation for Mrs. Scoresby, if she should express a desire to go. Dr. Scoresby, having received intimation of these arrangements in a letter from Mr. Graves, dated 5th December 1855, immediately applied to the Admiralty and other

departments for the use of instruments necessary to his investigations, and in all instances met with a cordial co-operation. He set out soon afterwards for Liverpool to witness the *swinging of the ship*, an operation which, though attended with serious loss of time and expense, was performed a second time for his convenience; indeed, he experienced unbounded attention and kindness from the owners of the vessel, administered in a polite and obliging manner by their agents, Messrs. Gibbs, Bright, and Co.

The proceedings of the voyage have been so lately published that it would be simply a work of supererogation to repeat the details. The *Journal* of the voyage gives a complete description of the compass arrangement, which, of course, included the *compass aloft* on Dr. Scoresby's plan, of the general appearance and accommodation of the vessel, together with a vivid and eloquent narration of many of the scenes through which she passed. It is an interesting monument of that noble but ill-fated ship.

"Up to the time of my first sight of the *Royal Charter*," the *Journal* records, "the question of whether my wife should accompany me had never been raised. A deep feeling of responsibility, as to her undertaking such a long voyage, and the risks of health, life, and safety in passing through every variety of climate, and some of the most stormy regions of the globe, prevented my making any suggestions on the subject, much as my personal comfort was concerned.

"Feelings of deep anxiety, however, on her mind, as

to an adventurous undertaking on my part, in which several months would probably elapse before any communication could reach her, served to overcome an inherent dread of a long sea voyage, and induced her to urge that she might accompany me; and so, happily for both, it was eventually arranged that she and her maid should accompany me."

They embarked on board the *Royal Charter* on Thursday, January 17, 1856, at 2 P.M., and the vessel with her animated, bustling freight of human beings, numbering in all about 400 souls, weighed anchor on the following morning. The outset of the voyage was by no means propitious. Thick weather, with the wind dead on shore, operating upon a new vessel with stiff tackling, resulted in an unpleasant proximity to the *Tusker*. This danger passed, other discomforting circumstances, incidental to a new ship, arose, especially the flooding of the 'tween-decks from water entering by the covering boards. These were so aggravated by a brisk gale that, in consideration for life and property, the captain deemed it prudent to change his course and make for Plymouth harbour, where the *Royal Charter* entered early in the morning of Saturday, the 26th of January. Whilst some alterations were being made in the trim of the vessel with a view of promoting her sailing qualities, and at the same time of improving the accommodation of the second and third class passengers, Dr. and Mrs. Scoresby returned to Torquay, and remained at the Castle until summoned by telegraph to rejoin the ship. They sailed

from Plymouth on the 16th of February, and, after a comfortable voyage, arrived at Melbourne in the unprecedentedly short period of fifty-nine days. The description given in the *Journal* of a storm encountered on the 6th of April is most interesting, parts of which, for contrast with the perils of his earlier voyages, and as a last scene in Dr. Scoresby's active sea life, may be quoted :—

“Suffering from cold and sore throat, I could not venture to brave the storm on deck as I could have wished, or do more than observe the effects of the furious storm from the ‘companion’ and poop-deck, and, after some abatement of the wind, from the mizen rigging.

“At 10 A.M. the scene was awfully sublime, and shortly afterwards, about 11 or 11.30 A.M., it was in its highest condition of terrible magnificence. The continuance of the wind for several hours steadily at west (the direction of a previously existing swell), produced waves of the most formidable magnitude ; whilst the sea, from its commencement at north, and a former sea from the south-westward, threw up perplexed waters into the most strangely tumultuous peaks, and crests, and other forms of waves. The sea was to me a new phenomenon. Even in the terrific and devastating hurricanes of which I had so often read descriptions, the sea has rarely time to gain the enormous height it now had with us—a height frequently of forty feet—regular waves rolling in the direction of the wind, and incomparably higher peaks and crests produced by crossing waves. Here, too, every feature of the tempest was set forth in grandest, and

most awful magnitude and sublimity. The fearful force and grandeur of the waves—the fierce howling of the storm—the novel and majestic magnitude of the crests, and peaks, and broken summits—the peril to ship and life in the event of an accident to the helm in scudding—the glorious action, as I may call it, of the ship under these tremendous disturbances—and the drift sprays, confounding sight, as an atmospheric haze,—gave the deepest interest to this memorable scene! These features of grandeur were made more impressive, by not unfrequent gleams of bright sunshine penetrating amid the broad cumulus—like masses of cloud which drifted across the upper sky, and throwing beams far from cheerful into the midst of the exciting scene—an incongruous glare of heavenly light which threw the rest of the picture into more striking contrast—and which, on the coming over us of the rain, or snow shower of the fiercer squalls, painted the dark threatening astern with more ominous blackness. . . .

“As to the condition of the mighty disturbed water, with reference to Him by whose power it is so raised, and by whose Providence it is so restrained, the expressions in the ‘Forms of Prayer to be used at Sea,’ in our admirable Liturgy, are striking, where we say, ‘O most powerful Lord God, at whose command the winds blow and lift up the waves of the sea. . . . Now we see how terrible thou art in all thy works of wonder; the Great God to be feared above all.’ And then, in the thanksgivings for preservation under such threatening circumstances, we are instructed to say, ‘O most mighty and

gracious God, thy mercy is over all thy works. . . . Thou hast showed us how both winds and seas obey thy command,' &c.

"But let me attempt to describe more of the scenes aboard, as they appeared to me from my posts of observation, looking first at 10 A.M. from the main companion, and subsequently, in the height of the hurricane, from the fore part of the poop deck. The sea, as I have remarked, was to me a new unseen phenomenon, or aggregate of phenomena. Two or three circumstances were of this peculiar and characteristic order. I had seen and observed the action of a heavy gale coming on suddenly many times in the Arctic seas, but it was generally in a smooth, or but moderately undulating sea, where, before waves of the first class had time to form, the secondary and missive seas, first obeying the influence of the wind, would be perpetually crested with white water, and this lighter portion of the liquid element carried forward and spread abroad in a low stratum at the surface of drift spray. But here the phenomenon, whilst corresponding in its source and nature, was of an extent, in quantity, density, and height of distribution, to which I had seen nothing approaching, or giving an impression of the strange effects I now contemplated. The drift spray was the produce of every wave and variety of wave. No wave could keep pace with the legitimate demands, in hydrodynamic law, of the wind's terrible vehemence. Waves of forty feet height, which satisfy the greatest demands, perhaps, of any of our North Sea or high northern Atlantic storms, bore no adequate relation to the impetuosity of

this hurricane tempest. A sort of surface impetus seemed to be given, forcing the crests of the loftier waves into a velocity so much beyond the motion of the regular undulations, as not only to cast almost every peak and summit into the form of a breaker, but in some cases to give such a degree of magnitude and breadth to the breaking summit—as one mass of white water labouring forward after another, and retarded by the diminished velocity of that before it—that the main surface *behind* some of the mightiest waves would present but one unsubdued and wide-spread breast of foam,—a phenomenon I had never seen but in waves breaking over broad masses of ice, or over an insulated shelving rock ! Then, as if impatient still of results proportionate to its mighty forces—or as if indignant at the tardy and imperfect obedience—the vehement storm not only blew off the lighter summits of the foaming crests, but actually seized upon great masses of the roaring peaks of crossing seas, cut them off as it were from their legitimate support, and drifted them away with the measure of its own vast speed in that form of storm spray to which I have referred. Thus the quantity of drift from this source and that of the minor waves, constituted a stratum of haze so thick and dense that, whilst the sun's rays obtained free ingress, vision from the poop of the *Royal Charter*, where the eye was about twenty-two feet above the level of the sea, was limited in all directions, and for hours of continuance, to about the third part of a mile !

“ Another noticeable particular arising from the phenomenon just described, and illustrating the peculiarity and

severity of the storm, was the extent and manner in which the whole surface water was embossed by the residual foam of the curling and breaking waves. In ordinary gales, this embossing of the surface is limited mainly to broken parallel streaks, taking the direction of the wind—for which it forms a convenient guide—with occasional patches not so cast into shape; but here, besides the prevalent wind streaks of residual foam, the sea generally was so thoroughly marked by it, that on careful observation, I could scarcely detect a single square yard of surface that was free from it. Such a circumstance I had never before remarked, at least in the midst of a gale, where regular waves of the highest measured magnitude had had time to form.

“The primary waves on this occasion were in many cases of great extent in one undulation and crest. Many were estimated as spreading out to an extent of a sixth, a quarter, if not of half a mile. The extreme height in the fiercest of the gale, I could not, being so unwell, attempt to measure. But in the course of the afternoon, after two or three hours of perceptible diminution of the storm, I found the prevailing seas of some thirty feet in height, and numerous higher waves of broad extensive solid water-crests or summits, ranging from forty to forty-two feet or more, with knots and broken crests some yards higher. . . .

“But there was within board a picture full of life and interest, which may well claim a place for special description. This was exhibited on the platform of the poop in the steering, and was fully displayed in broad and striking

aspect at my station in the companion. We had no anxiety about the security of the sails and spars of this admirably rigged ship ; no one had a fear, after our much and gratifying experience, but that the *Royal Charter*, if her head could be kept the right way before the hurricane, would, as a seaboat, do her duty nobly. But no one experienced in scudding before a fierce gale and heavy sea, and knowing how the safety of the ship depended on the steering, could contemplate the possible failure in apparatus, gear, or management of the helm of the *Royal Charter*, when so scudding under the violence of this terrible cyclone and tremendous sea, without much anxiety. Every ordinary precaution had indeed been taken to guard against the breaking of the wheel ropes, which in a former part of the voyage had all but happened—men being stationed at hand on the poop, and relieving tackles being placed in the most advantageous position for being attached to the tiller in case of necessity ; but still, the uncertainty of putting into effect this appliance in time to prevent the ship broaching to, left a risk open, which no reflecting person could overlook or fail to be impressed with.

“ This well-apprehended risk it was which gave character and sharpness to the picture of energetic life about the helm. There you saw four men—the best class of seamen—supported by others on either side of the deck, superintended and sometimes vigorously assisted by the hand of a principal officer—keeping the wheel in active play, as they endeavoured to counteract any side-way tendency of the ship’s head, or to anticipate the probable swing from previous movements of the wheel

or impulses of heavy seas. Every man there was a picture of energetic manly life. You saw in his face an expression, to be read of every one, that he felt that in the management of the wheel he held the destinies, under Providence, of ship and human life in his hands,—that the ship broaching to by his failure in seamanlike tact and management would be destruction; hence the picturesque adaptation of his strength and figure showed, in nature's true developments of expression and beautiful-ness of manly excitement, that the importance of his performance and duty was fully realized. Then there was the captain, standing a few yards forward of the helm, in front of the skylight—his figure and features characteristic in expression of an intelligent perception of his responsibilities, and his reliance on his experience of direction in difficulties and perils—his position partly sideways, so as to be able with equal facility to watch every movement of the ship's head and every turn of a spoke of the wheel, and thus giving impulse and guidance to the helmsman in usual emphatic words: 'Starboard! starboard!—steady so—port a little—meet her again—mind your starboard helm,' and so on,—the tendency of the ship indeed from the wind being slightly on the starboard quarter, was to spring to in that direction, requiring the greatest possible watchfulness on the one part and anticipation by the helm of such movement, to keep the ship's fiercely-urged progress, especially on occasion of not unfrequent hard blows of the sea on the starboard quarter, on a safe and pretty steady course.

"Were I a painter, there is no scene which, since my

abandonment of Arctic adventure, has come under my personal observation, that I should more earnestly attempt to place on canvas than the poop deck of the *Royal Charter*, with the immediate elements for a picture with-out, during the height of the hurricane. First, in the after part of the ship, looking upward, we should have the mizen-mast of the ship denuded of all sail, with the cord-age swelling out forward under the force of the wind—then the ship herself cast into an oblique heel towards the port side, the stem raised high by a mountain-like wave—then the living pictures at the helm—the attending officer and the directing captain standing sideways, in the foreground of all; then externally, the assailing mountain-like wave, following close on the starboard quarter, and giving the direction and angle to the ship's inclined position, yet threatening, as many such waves do, to overwhelm the ship in mightiness of waters; then the atmospheric part of the picture—the mistiness of the storm-drift—the sun throwing a lurid glare through an aperture in the dense masses of cloud flying above, eliciting in the sea-spray of some immediate breaking crest a striking and brilliant segment of a prismatic arch—and finally, beyond this, astern, or on the left hand of the picture above, an approaching squall shower, thrown by the contrast of the penetrating sunbeams into the aspect of consummate threatening and blackness !”

During their sojourn in Australia, Dr. Scoresby was obliged by the nature of his magnetical inquiries to remain close by the ship, and could seldom spare more

than a day or two at a time for pleasure excursions. They were entertained, however, in a most hospitable and flattering manner. A few very pleasant days were spent at Balmerino, the villa residence of Mr. William Hamilton Hart, senior partner in the office of Messrs. Bright, Brothers, & Co., colonial managers for the Liverpool and Australian Navigation Company, from whom they received much kind attention. A second absence from the ship was pleasantly spent in visiting his Excellency Major General Macarthur, acting governor of Victoria, at Tourac, three miles from Melbourne, where they "were made acquainted with a refined and charming society in an almost continuous series of social dinner parties." The University of Melbourne did Dr. Scoresby the honour of conferring upon him the honorary degree of *Master of Arts*.

In a lecture delivered in Whitby soon after his return to England, Dr. Scoresby gave a brief but comprehensive sketch of his proceedings in Melbourne and on the homeward voyage. The lecture was reported almost verbatim in the *York Herald* of 8th November 1856. On that occasion, speaking of a day spent in the suburbs of Melbourne, he said,—

"The suburbs of Melbourne are not interesting, as Melbourne is not so picturesque as Sidney, which surpasses anything in the whole region of Australia, for the beauty of its harbour and the splendour of the scenery. In some of the suburban towns, however, as in a place where we resided, partly in the bush, or what in England

would be called park-land, the scenery is extremely beautiful and picturesque. We visited this place with a view of going forward to the gold diggings. I had not time to go to Castlemaine and Ballarat, but was content to see something of the nature of the process, and likewise the bush, on our progress. The most convenient place was Anderson's Creek, which frequently runs nearly dry in the summer. In the bed of the river the gold is found in the form of dust and nuggets. To this place we went, rather a curious journey. Our party consisted of three ladies and four gentlemen. Our friends provided open carriages and all necessities. The one I was in was a two-wheeled vehicle. The one my wife was in was of more safety in the construction. It was rather curious to watch our progress—the dashing manner of the drivers, the deep ruts, where the drivers would go winding in and out by the stumps of trees, a foot high, winding again where other carriages had gone, so as to make progress, and that very rapidly too, and sufficiently trying to persons accustomed to our roads in England. In some parts of the track the road was unmade, or only one side, so that we ran considerable risk of losing our balance. It (the vehicle) was driven by a gentleman of considerable substance. Every time we lurched a little, my friend would thrust himself over the 'starboard' side of the ship, as the sailors call it, and keep the carriage on its balance. He knew how much the carriage would stand, and how to balance it with his weight and mine. On one occasion we crossed a very narrow ravine, on which was placed a parcel of rough poles. Over this

there had been placed a lot of brushwood. The vehicle that had gone before us had broken through, so that with regard to those that followed, it was anything but a pleasant operation to take a horse scampering over. However, our charioteers being military gentlemen, I found their mode was to dash across. Eventually, we got to the alluvial deposit at Anderson's Creek. We found some tents which ten men could just creep into; others had huts of bark, cut in large portions, and laid on in stripes. We visited two descriptions of diggings—one was the alluvial in which they washed the gold, an operation so simple that all the party requires is a bowl and cullender, and a thing like a cradle. This, however, is becoming so far exhausted as to become scarcely remunerative. Some diggers came from California, who knew just where to look for the alluvial deposits, and pounced upon them. They were eminently successful if they found two streams flowing together. The conflux was called a 'pocket,' and without damage to their neighbours, and with great advantage to themselves, they 'picked' these 'pockets.' The other description of digging is by the ordinary process of shaft-sinking. In some cases the digging is undertaken in a place where thousands of years ago there had been a stream running. The basalt, having burst out from a deeper part of the earth, has overflowed the auriferous stream and filled it up. In subsequent ages deposit has occurred upon that, and now, after digging through the alluvium and basalt, the miner comes to the alluvium again, with its great treasure of gold dust and small nuggets. The other mode

is to sink this shaft until the miner gets into an auriferous vein of the quartz. This is now the prevalent plan; but it is a very expensive one, and makes men less independent. Poor men cannot work at all, but must engage themselves to persons who have money, for they may work two or three months before being remunerated. When once they get into the auriferous vein, they find it exceedingly productive, in some cases yielding very large returns. They are now learning to crush the ore by improved processes, so that as the difficulty of getting gold becomes greater, the quantity is maintained by the improvement in working. Perhaps £10,000,000 sterling have been already obtained from the gold diggings in the neighbourhood of Melbourne. As part of the freight of the *Royal Charter* we had seven tons of gold."

Speaking of the results of his magnetical experiments, Dr. Scoresby said, in the same lecture,—

"I have stated that a ship at Melbourne would have her magnetic condition, according to my theory, turned upside down. The upper part of the ship which in England always has southern polarity, and attracts the north pole of the compass, would, in Melbourne, have northern polarity and repel it. When the *Royal Charter* left Liverpool, and when she returned her state might be thus represented:—

Stern of Vessel.	Deck. Southern magnetism. Northern magnetism. Keel.	Head of Vessel.
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"The question is, Was the opposite the case in Melbourne? The first opportunity of trying this was in entering Port Philip, when I found that the upper part of the ship had changed its polarity, and was now northern. On going down the vessel, I found the polarity diminished until, in the middle, there was no polarity. I subsequently found that the longitudinal line of non-polarity was not straight, but waved. Above this line the north pole was repelled, below it was attracted. My theory was verified. Everything that in Liverpool was northern was now southern. This went so far that the pillars, anchor stocks, and standards of the upper parts, instead of having southern polarity, had in every case northern polarity. Every principle I had asserted was completely verified. The compasses were adjusted on the very ingenious principle of the Astronomer Royal, the errors being compensated by antagonistic magnets in England. Exactly as I had said before the British Association in 1846, these compasses not exactly ceased to be useful, but they actually went further wrong than any others on board. Every principle of a compass aloft, as the only means of a safe guidance, was fully established. If he cannot combat with an enemy, a wise general gets as far away from him as he can. In our compass aloft we had our perfect guide and standard of reference at all times. We always knew what course the *Royal Charter* was steering, and never had the slightest doubt, notwithstanding the changes going on in other parts of the ship."

The *Royal Charter* sailed from Melbourne, on her

homeward voyage, on the 25th of May. The saloon passengers beguiled the time by various means, especially by amateur concerts, which were rendered exceedingly attractive by the presence of Miss Catherine Hayes, whose amiable manners won the esteem of her fellow-voyagers. On one occasion this benevolent lady, on being told that there was among the third-class passengers a widow who had spent her all in procuring a passage for herself and six children, offered to join in a concert for her benefit, whereby the poor woman was enriched with no less a sum than £40. Dr. Scoresby was by common consent nominated Chaplain of the *Royal Charter* in both voyages, in which capacity, he said, he "had a compact parish of four or five hundred souls." On Sundays they had morning service either under the awning on the poop deck, or in the saloon, according to the state of the weather, and evening service in the mess-room of the third-class passengers. Of the two classes he said, "If I might make a distinction, my visits to the fore-part of the ship—the earnest, heartfelt songs of praise of the miners and sailors—stood in favourable comparison with the congregation in the saloon. Their profound attention, and the respect with which they listened to the exhortations, were exceedingly satisfactory to myself and those who accompanied me. Many deeply profited by the example thus set them of improving *the good day*."

After a prosperous voyage, the *Royal Charter* brought up in safety* in the Mersey, on the 13th of August 1856;

* On the 24th of October 1859, the *Royal Charter* arrived at Queenstown, after an unprecedented voyage of fifty-eight days from Melbourne. She landed

and, as soon afterwards as the necessary communications with those in Liverpool who were interested in the chief designs of their adventure would permit, Dr. and Mrs. Scoresby proceeded to Torquay. It had added greatly to the comfort of their voyage that Mrs. Scoresby had been enabled fully to enjoy the sea, none of the discomforts which are the bane of most voyagers having distressed her. The hopes expressed by Dr. Scoresby of improvement in his own health were not realized. The anxiety which he felt in the issue of his undertaking, and more especially his indomitable energy and vivacity of mind,

seventeen passengers, and proceeded on her way to Liverpool on the following day. At half-past four in the afternoon she passed Holyhead, and rounded the Skerries in safety to the pilot ground. How calamitous the rest! When abreast Point Lynas, the wind, which had been south-east, chopped round to the north-east, and freshened to a hurricane, so that all available means were required to preserve the vessel from a lee shore. Two anchors were let go, and the screw was kept going to relieve the strain, in the hope that she might ride out the gale, but in vain. Approaching night and the thickness of the weather prevented a communication with the shore. The snapping of the chains, the shock as she met the rocky ground, the cutting away of the masts, were evidences enough of her hopeless condition. By the bravery of Joseph Rogers, a Maltese sailor, a hawser was carried on shore, by means of which a few lives were rescued, and probably all would have been saved had not the vessel parted. The exact time of the catastrophe was marked by a number of watches afterwards picked up, all of which had stopped at *half-past seven* on the morning of the 26th. By this disaster three hundred and eighty-three human beings perished, of whom ninety-six were crew; only nineteen persons were saved from the wreck.

How deep was the *sorrow on the sea* that night; and scarcely less the sorrow the land! Numbers of persons who had hastened to Liverpool to greet their long-absent relatives and friends, now hurried with despairing countenances to the place of so great destruction, and with aching hearts searched out the few survivors, each one hoping against hope that they whom he sought would be found among them. For many days the sea continued to give up its dead. The beach was traversed by multitudes who still lingered to perform the last sad requirements for those whom they had journeyed to welcome in the full vigour of life. For the purpose of relieving the temporal necessities of those who had lost all their worldly means, a subscription was raised, which, under the direction of Messrs. Gibbs, Bright, & Co., met with a liberal response.

having occasioned too great fatigue and exposure of body throughout the voyage. Could he have rested for a time after his arrival in England, he might perhaps have gained strength enough to ward off the illness which was so soon to prostrate him alike in body and mind. It has been said, indeed, that he sacrificed his life in the noble object of obviating dangers which threatened the destruction of his fellow-beings. These are but vain conjectures, though, to all human understanding, his life would probably have been spared longer had he not gone to Australia; yet none knew better than he at whose bidding he must surrender his temporal state, and he expressed no anxiety as to where he might be, or how employed, when the summons reached him, so that his heart were sanctified to his Master's cause.

He was "a good deal over-exerted" for many weeks subsequent to his return to Torquay. The preparation of the VOYAGE for publication absorbed much of his time and strength. He was able to bring the work into a condition of great forwardness for the press, but it was left to other hands than his to bring it before the public. Of the results of the voyage, in its leading features, enough for the present work has been already said in mentioning Dr. Scoresby's satisfaction at the full establishment of his theories.

In October, accompanied by Mrs. Scoresby, he paid a promised visit to his friends at Whitby, and spent several weeks among them, residing chiefly with Mrs. Clark at her residence, which occupies a pleasant position about twenty minutes by rail from the town. From the more

than wonted gentleness of disposition and Christian solicitude for the welfare of those around him, displayed during this visit, together with a sense of more than ordinary endearment on the part of his relatives and intimate friends, the painful apprehension of long separation was engendered. Even his last discourse in the parish church was construed into a *farewell sermon*. It was during this visit that he delivered the lecture which we have quoted.

An engagement to deliver a course of lectures at the Philosophical Institution in Edinburgh led him thither in November. During his residence in that city he was most hospitably entertained in the house of the Honourable Mrs. Mackenzie, a lady who by her eminent piety and Christian worth had won Dr. Scoresby's highest esteem and respect.

The first of the course of lectures, ON THE ARCTIC REGIONS, was delivered to a crowded audience in *Queen Street Hall*, on the evening of November 18th. In consequence of the flattering manner in which this was received, Dr. Scoresby consented to deliver the remaining three in the *Music Hall*, for the accommodation of greater numbers of hearers, several hundreds having been turned away from the previous lecture from want of room. The second was delivered on the evening of the 21st. It required great effort on the part of the lecturer to make himself heard throughout this spacious hall; nevertheless he accomplished it perfectly. The third lecture—fixed for the 25th—was, in consequence of Dr. Scoresby's delicate health, postponed a

day or two ; but ultimately both the remaining ones were delivered—the last on December 4th—with equal fervour and animation. He was solicited to re-deliver the course in Edinburgh, and likewise by the Lord Provost of Glasgow, to deliver a course in that city ; but in both instances he was obliged to express his regret that his health would not permit him to undertake any further occupation of an exciting or fatiguing nature.

On the 5th of December Dr. and Mrs. Scoresby left Edinburgh for Polloc, the seat of Sir John and (the late highly esteemed and deeply lamented) Lady Matilda Maxwell. With these kind friends they contemplated a visit of a week or two, making that direction their way to the south. Here the first alarming symptoms of that dread disease which, *by the trying of his faith*, was to *let patience* in him *have her perfect work*, manifested itself, after a severe fit of coughing, in the expectoration of a quantity of blood. He was dressing for dinner at the moment, but, by the kindness of his hostess, was excused from appearing, whilst he received every attention which affectionate friendship could devise. His complaint was valvular disease of the heart, which, by occasioning congestion of the lungs, gave rise to the alarming symptom above mentioned. I believe he was conscious, from its first appearance, of the dangerous and almost hopeless nature of his disease ; yet his wonted calmness and serenity of mind remained unaltered. Thinking it better to return by way of Edinburgh, they arrived again beneath the hospitable roof of the Honourable Mrs. Mackenzie on the 13th of December. Of this lady's

affectionate interest and kindness he delighted to speak, as also of the earnest solicitude of her amiable daughters, the Misses Mackenzie. Under the care of Dr. Hunter, furthered by the tranquillity which was preserved to him by the carefulness of his kind hostess, he was so far recovered as to be able to leave Edinburgh on the 21st of December, and proceed by easy stages to Torquay. For a few weeks after his return to the milder climate of the south, Dr. Scoresby's health somewhat recruited; but he was never able to resume the lectureship at Upton Church, a circumstance which grieved him much.

On the 31st of January 1857, he wrote to the Honourable Mrs. Mackenzie in the following words:—

“MY DEAR MRS. MACKENZIE,—Scarcely a day has passed (if a single day) for some weeks, in which I have not thought of doing what I now commence. But I will delay no longer—knowing your kind and affectionate interest, as so expressively shown by *more* than words when we had the pleasure of being with you—in respect to my progress, in writing for myself. In some particulars I feel better and get on better; but I do not yet attempt any duty on the Sundays—my greatest deprivation. Doctors I have not yet consulted. Some would blame it as a mistake or error; but I feel that when I begin I must leave off self-administering, and get into a certain bondage I do not like. Probably, however, I shall take advice soon. Whilst without distrust of the principle that our times are in His hands—a Father's hands—I equally hold to the duty of using all reasonable and

available means. But I am not sure the good doctors like *me* as a patient. The last one I employed till of late—except our domestic surgeon, who has done me admirable service in a case of severe and dangerous accident—remarked, I was told, of the results of his experience with me when ill with an attack of erysipelas, that ‘he had rather attend *ten fools than one philosopher!*’ So I hope you, dear Mrs. Mackenzie, being able so well and satisfactorily to domesticate, and, with your kind family nurse, to take care of the said philosopher, must prove (if Dr. L—— was right) one of two things—either that he has been improved, or, what is far more probably the fact, that you had domesticated and nursed with better feeling and forbearance than the good doctor!” . . .

Soon after this letter was despatched more distressing symptoms manifested themselves, especially in a severe cough and difficulty of breathing, from the congested state of the lungs. Mrs. Scoresby became greatly and justly alarmed; the more so, when, day after day, in spite of her tender care and watchfulness, the invalid became gradually more distressed. He was attended by Mr. Pollard, his usual medical adviser, associated latterly with Dr. Evanson.

None but those who have witnessed the distressing symptoms which arise in that form of heart disease from which Dr. Scoresby suffered, can appreciate the terrible agonies which he must have endured. About the middle of March his medical advisers pronounced an opinion against hope of his recovery. For some weeks previous

to this the gentle and patient sufferer had not been able to lie down, from oppressive difficulty in breathing when in a recumbent posture. Supported by pillows in an easy chair, he passed his days and nights of suffering in that organ room, the lovely view from which he mentioned when last confined in it. Life, perhaps, was never oppressive to him until now, when its tenure became daily finer and more uncertain. Yet he never for an instant rebelled against the chastening hand of God; but often, when he could not find breath to express a bodily want, he still uttered a flood of aspirations to heaven, whither he was so soon to follow. But let me employ the words* of one who, associated with him in Christ's ministry on earth, was privileged to be with his friend on many occasions immediately previous to the final summons which called him to the rich inheritance awaiting him on high. He says—

“I have chosen this text for the present discourse because it was repeated to myself under the most affecting circumstances, during his last illness, by that eminent servant of God, the late lecturer of this church, whose mortal remains we committed to their final resting-place but yestermorn, in the church-yard adjoining this house of God. I think it most becoming that I should not permit this solemn opportunity to pass without an attempt, however feeble, to improve it, nor my dear friend and

* From the FUNERAL SERMON, by the Rev. R. R. Wolfe, M.A., incumbent of Upton (who has kindly permitted me to make use of it), from the text, “Having a desire to depart, and to be with Christ, which is far better” (Phil. i. 23).

fellow-labourer in the Lord's vineyard to depart, without some slight public recognition of his services and tribute to his genuine worth, not less as a Christian philosopher than as a faithful and zealous minister of Christ. To review his whole life, to portray the varied means by which he endeavoured to adorn the doctrine of God his Saviour, and to promote the best interests of mankind, would be out of place on the present occasion, even if time permitted it. I shall therefore confine the few remarks I shall make rather to the connection which, for a period of more than three years, has existed between yourselves and him as your pastor in the Lord. On his coming to reside in this parish, though, from his age and circumstances, he might well have claimed the indulgence of private retirement, yet, as you are aware, he was not content to do so, but sought a sphere of active usefulness in the lectureship of this church, and that without the desire of any remuneration for his services. It was to me a source of the highest gratification to be associated in the work of the ministry with this eminent Christian man, and I readily, therefore, acceded to his wish, and committed into his hands the afternoon service of this church. How well, how faithfully, how successfully he performed his work, I need not remind you who were his constant hearers ; for myself I truly say, whenever I had the gratification of listening to his powerfully intellectual expositions of the word of God, to his warm and affectionate appeals to the sinner, and to his well-enforced encouragements in the ways of holiness to the godly and believer, I was led to thankfulness and gratitude to the Wise Disposer of all

events, who, in the ordering of his providence, brought him to be my fellow-helper in the church.

“The place that knew him here shall now know him no more. This exemplary Christian has been called to his reward, at His hands whose he was and whom he served zealously and faithfully.

“Oppressed with sickness and the most painful feeling of weakness in his last days, he was led like the great apostle, to ‘desire to depart and to be with Christ,’ which he was convinced would be ‘far better’ for him.

“He believed that though he died yet should he live, because his life was hid with Christ in God; and that when Christ, who was his life, should appear, then he should appear with him in glory.

“That dispensation of God’s providence which has left us sorrowing mourners at his loss, has been to him great gain; for it has ushered him into the broad sunshine of glory in the presence of his Redeemer. From his childhood he was led to know and serve the Lord; and during his long and peculiarly chequered and interesting life, he did not depart from the right way, but sincerely endeavoured to adorn the doctrine of God his Saviour in all things. With respect to his public character, I may say of him as was said of another faithful servant of God, ‘Eminently gifted by nature, eminently endowed by grace, he was peculiarly adapted to address an intelligent congregation—to build them up in their most holy faith—to warn them against the prevailing errors and corrupt vices of the day—uniting, as he did, the maturity of sound experience and ripened judgment with the most

zealous energy—blending the fervour of a glowing imagination with the wise discretion and well-regulated caution of a sober mind—presenting a singular combination of the grace of God with the highest intellectual powers and attainments—he was never carried away or betrayed into the advocacy or adoption of the unfledged theories and crude systems which, under the garb of novelty, surprise and attract, but do not improve. Ever basing solid argument upon the broad principle of divine truth—ever upholding, by word and conversation, the expansive charity which that truth inculcates—ever resting in quiet consistency of mind upon God's revealed word, as embodying the "charter of his hope in Christ," he had peculiar attractions for the intelligent minds of his hearers.' And as in public so was he in private, in the social intercourse of the domestic circle. Endearing and attractive, nay, I may say, his conversation was fascinating, and his manner ever that of a gentleman and a Christian.

"But I must not lift the veil too high nor expose the precincts of the domestic circle, but will hasten to a brief account of his last moments.

"On the 7th day of March it was my privilege to attend upon the suffering philosopher and Christian. I had seen him before, I have seen him since, but on that occasion his conversation was so remarkable, that on my return home I noted down the substance of it, by way of memorandum. It was to this effect: The sufferer was exceedingly weak, and much oppressed in his breathing; expressed his thankfulness to God that he was only *oppressed*, not *depressed*. Felt he should not recover,

and spoke in a calm and collected manner of what I should do for him after his decease. It was most delightful to witness with what composure this Christian man looked death in the face and spoke of his departure. He said he was quite resigned to the will of his heavenly Father, and was most happy in the thought of death ; that he knew Him in whom he believed, and was sure he was able to keep that, even his soul, which he committed to him, safe against the great day. After some further conversation, he broke forth into the most earnest exposition of his own feelings upon the subject of those doctrines and principles which he had inculcated on others. ‘My dear friend,’ he said, ‘I would that all should know the satisfaction and comfort I myself can now derive from those doctrines which I have ever maintained and preached. I thank God I can *now feel* the truth in my own heart as I have declared it to others. I thank God I feel those doctrines *now* to be the truth as it is in Jesus ; I have preached *Christian practice and conduct* as well as *faith*, and I *now* see and feel the force of it ; I have ever condemned, and I now repeat my condemnation of the mere sentimentalism of religion, “Faith without works is dead.”’ He went on in this strain until he was almost exhausted. I endeavoured to console and comfort him with the hope that it might please God to restore him and grant him a longer continuance amongst us. He replied in the words I have chosen for the text, “I desire to depart and be with Christ, which is far better ;” but if it be his will to spare me, I trust I shall still live, as I thank the power of his grace I have been enabled to

do heretofore, to his honour and glory.' He checked me more than once on this and other occasions, when I alluded to his eminent services in the cause of God and of his fellow creatures, and would not admit that he had ever been anything but an unprofitable servant.

"Before I left him on the occasion referred to he requested me to pray with him, and this gave rise to very remarkable testimony in favour of the form of prayer in daily use amongst us. He said he had been brought up from his childhood in the belief that no prayers were so good on every occasion as extempore prayers; he said his predilection from early associations would be entirely in favour of them; and, continued he, 'I now say to you, and you are at liberty to make what use you please of the confession, I now declare, under the solemn feeling that I am a dying man, under the weakness and oppression of bodily suffering, that the Prayers of the Church, in the Book of Common Prayer, are to me most expressive of my wants and feelings—are most comforting and consoling, and come most appropriately home to me in my sickness and weakness.' These were the very words he used, and he then requested me to pray with him, the general confession, to pronounce the absolution, and to conclude with the prayers in the service for the visitation of the sick. On the last occasion I saw him alive, about nine o'clock on the night of his death, I consulted him as to what devotional exercise he would desire. He still repeated his wish for the Church prayers, and with the utmost fervency followed me through to their conclusion.

"Before the sun had risen again upon the earth his

sanctified and redeemed spirit had taken its heavenward flight; he fell asleep* without any apparent struggle; his desire to 'depart and be with Christ' was fulfilled; 'he was not, for God took him.' "

Torquay presented a saddened aspect on the morning of Saturday the 28th of March, whilst the funeral *cortège* was solemnly wending its way from Grosmont, Dr. Scoresby's late residence, to the place of interment at Upton Church. Great respect for his memory was evidenced among the middle classes of the town by the closing of the shops during the sad ceremonial. The vessels in the port testified the reverent sympathy of the seafaring public in having their flags half-mast high; whilst the respect of the immediate friends of the departed was displayed in the swelling of the procession by upwards of twenty private carriages. The bells of Upton Church proclaimed in muffled peals the sad event of the day, whilst the mourning drapery with which the interior of the church was clothed filled up the measure of the prevailing gloom. The pall-bearers were—the Earl of Beverley, Hon. John Boyle, Sir H. Bold Hoghton, Sir Culling Eardley, Captain Ward, and Mr. Vivian.

A subscription was immediately set afoot for a monument to the memory of Dr. Scoresby. The amount collected being more liberal than was anticipated, a large surplus remained in the hands of the committee. This was applied to the perpetual endowment of a *bed* in Tor-

* At 2 A.M. March 21st.

bay infirmary, to be called **THE SCORESBY BED**, and to be kept for the use of sick sailors.

"The monument," says the *Torquay Directory*, "which is of Gothic design, sculptured in Caen stone, is placed on the north wall of the nave of the church, and may be thus described:—From side buttresses, terminating in pinnacles, springs a pointed arch, in the spandril of which is a scroll bearing the text, 'He being dead, yet speaketh.' In a panel on the base are grouped an open Bible, a ship and anchor, a mariner's compass, and other mathematical instruments; and on a tablet of pure statuary marble, forming the background of the central nave, is engraved the following inscription, in old English:—

In Memory of
The Rev. William Scoresby, D.D., F.R.S.,
 Member of the Institute of France,
 and of various other Scientific Institutions
 in Europe and America.
 In early life a distinguished Seaman,
 renowned for his discoveries in the Arctic Regions.
 Afterwards Vicar of Bradford,
 and latterly
 Honorary Lecturer of this Church.
 Pious, Benevolent, devoted to Science,
 of surpassing energy.
 His friends and admirers,
 in grateful recollection of his Public Services,
 and as a testimony of their regard for his private worth,
 Have erected this Monument.
 Born at Cropton near Whitby. A.D., 1789.
 Died at Torquay. March 21st, 1857."

APPENDIX.

WORKS OF DR. SCORESBY.

Theological and Literary :—

1. Seaman's Prayer-Book (Selected chiefly from the Book of Common Prayer), for Use at Sea, with Psalms and Hymns, 18mo, Nisbet,	1822
2. Loss of the <i>Esk</i> and <i>Lively</i> , a Narrative and Sermon (preached for the Benefit of the Widows and Sufferers at Whitby), 8vo, Seeleys,	1826
3. An Address to Sailors on the Opening of the Liverpool Mariners' Church, 12mo, Kaye, Liverpool,	1827
4. An Address to Captains of Merchant Vessels, 12mo, ib.,	1829
5. An Address to Seamen on Intemperance and Improvidence, 12mo, ib.,	1830
6. Discourses to Seamen (preached in the Liverpool Mariners' Church), 12mo, Nisbet,	1831
7. Sorrow on the Sea (a Sermon preached at the Mariners' Church on the occasion of the loss of the <i>Rothsay Castle</i> , and Narrative), 8vo, 3d edit, ib.,	1831
8. Plea for the Unity of the Church (four Lectures preached at Bedford Chapel, Exeter), 12mo, ib.,	1833
9. Memorials of the Sea, comprising various Maritime Narratives, 12mo, ib.,	1833
10. The Believer's Consolation (a Penitentiary Sermon), 8vo, ib.,	1833
11. Memorial of an Affectionate Son, F. R. H. S., 12mo, ib.,	1834
12. Principles and Duty of Christian Loyalty (a Sermon at Exeter), 12mo, ib.,	1836
13. The Philosophy of the Gospel (a Sermon preached at Trinity Church, Clifton, on the Meeting of the British Association), 8vo, ib.,	1836
14. Persecutions and Sufferings of the Irish Protestants, 12mo, ib.,	1836
15. What shall we do? (a Sermon preached at Bradford to Destitute Workmen), 12mo, ib.,	1840
16. Lectures on Socialism (preached at St. Peter's, Bradford), 8vo, ib.,	1840
17. Position of the Church and Duties of Churchmen (an Address at the Bradford Church Institution), 12mo,	1843

18. Proposed Subdivision of the Parish of Bradford, 12mo, ...	1844
19. American Factories and their Female Operatives, with an Appeal on behalf of the British Factory Population and their Improvement, 12mo, Longmans, ...	1845
20. Position and Encouragements of Christian Teachers (a Discourse, and Rules for Sunday-School Teachers), 32mo, Taylor, Bradford,	1845
21. Condition and Prospects of Female Factory Operatives (a Sermon, preached to about 2000 Female Operatives), 12mo, Nisbet, ...	1846
22. Record of the Bradford Parochial Schools from 1839 to 1846 (19,600 children during this time passed through the Schools), 12mo, ...	1848
23. Jehovah Glorified in his Works (a Sermon preached at Edinburgh at the Meeting of the British Association), 8vo, Longmans, ...	1850
24. Sabbaths in the Arctic Regions, 8vo, ib., ...	1850
25. <i>The Mary Russell</i> , a Narrative of an Extraordinary Massacre, with Reflections on the Responsibility of Lunatics, 8vo, ib., ...	1850
26. <i>My Father</i> , being Records of the Adventurous Life of the late W. Scoresby, Esq., 8vo, ib., ...	1851
27. The Death of Czar Nicholas (a Sermon preached at Upton, Torquay), 8vo, ...	1855

Scientific:—

28. Notes of an Advance to Latitude 81° 30' N., the then nearest Authenticated Approach to the North Pole,—Memoirs of the Wernerian Society, Edinburgh, vol. ii., 642.	
29. Meteorological Journals kept in the Greenland Seas, ib., ...	1807-14
30. Account of the <i>Balcena Mysticetus</i> , and First Correct Figure of it, ib., i. 578.	
31. Account of Remarkable Crystallizations of Snow, ib.	
32. Account of the Greenland or Polar Ice, ib., ...	1814
33. On the Possibility of Reaching the North Pole, by a Journey across the Ice, ib., ...	1814
34. On the Size of the Greenland Whale, ib., ...	1815
35. Experiments on the Effect of the Pressure of the Sea at Great Depths, on the Specific Gravity of Wood, ib., ...	1816-17
36. Narrative of an Excursion on the Island of Jan Mayen, with Discoveries thereon, ib., ...	1818
37. On the Best Means of Overcoming Obstacles to Discoveries in the Arctic Regions, ib., ...	1819
38. Description of a Magnetimeter, and Discoveries in Magnetising Iron by Mechanical Action, Royal Society, Edinburgh, ...	1819-21
39. On the Anomaly in the Variation of the Compass on Shipboard, Philosophical Transactions, Royal Society, ...	1819
40. A Method of determining the Height of Cliffs and Mountains by Measuring the Depression of the Horizon, Edinburgh, Philosophical Journal, ...	1819
41. Account of the Arctic Regions and Northern Whale Fishery, 2 vols. 8vo, Constable, ...	1820

42. State of the Greenland Ice, <i>ib.</i> ,	1820
43. On Remarkable Atmospheric Refractions in Greenland, Edinburgh Royal Society's Transactions,	1820
44. On the Currents and Animalcules of the Greenland Sea, Edinburgh Philosophical Journal,	1821
45. On the Penetration of Wood by Sea Water at great Depths, <i>ib.</i> ,	1821
46. On the Cause of the Greenland Fogs, <i>ib.</i> ,	1821
47. Contributions to the Anatomy of Whales, Edinburgh Royal Society,	1821
48. On the Deviation of the Compass and its Fatal Effects, Liverpool,	1822
49. On the Errors of the Sea Rates of Chronometers by the Magnetism of their Balances and Chronometrical Compass, Edinburgh Philosophical Transactions,	1823
50. Journal of a Voyage to the Northern Whale Fishery, and Discoveries on the East Coast of Greenland, 8vo, Constable,	1823
51. On the Development of Magnetism in Iron and Steel by Percussion, Philosophical Transactions,	1822-24
52. New Magnetical Experiments, Edinburgh Philosophical Journal,	1824
53. Polar Regions, Article in Edinburgh Encyclopedia,	1825
54. Remarkable Rainbows, Edinburgh Philosophical Journal,	1826
55. Six Hours in Iceland,—“Winter's Wreath,”	1827
56. Remarkable Effects of Unequal Refraction, seen at Bridlington Quay, Edinburgh Transactions,	1827
57. On Bugle Echoes at Killarney, Edinburgh Philosophical Journal,	1828
58. On the Possibility of Reaching the Pole by a Transglacial Journey, and Remarks on Captain Parry's Failure, Edinburgh Philosophical Journal,	1828
59. On Red Snow on Ice in Greenland, <i>ib.</i> ,	1828
60. On the Uniform Permeability of all Known Substances to Magnetism, and Application of the Fact in Engineering, <i>ib.</i> ,	1831
61. An Exposition of some of the Laws of Magnetic Induction, <i>ib.</i> ,	1832
62. On the Deviation of the Compass, <i>ib.</i> ,	1832
63. On the Original Suggestion of the Modern Arctic Expeditions, <i>ib.</i> ,	1835
64. On Prismatic Colours in Dew-drops, <i>ib.</i> ,	1841-51
65. On Columnar Crystallizations of Ground Ice, <i>ib.</i> ,	1850
66. On the Earl of Rosse's Telescopes, and their Revelations in the Sidereal Heavens, <i>ib.</i> ,	1853
67. Magnetical Investigations on the Powers of Different Steels, and Sizes and Combinations of Magnets, Longmans, vol. i.,	1839-43
68. Magnetical Investigations on Terrestrial Induction and Iron Ships, <i>ib.</i> , vol. ii.,	1852
69. Zoistic Magnetism, 8vo, <i>ib.</i> ,	1850
70. The Franklin Expedition, with Maps, 8vo, <i>ib.</i> ,	1850
71. Magnetism of Iron Ships, and Remedies for Compass Disturbances (a Letter to the Liverpool Underwriters), 8vo, Longmans,	1854
72. On the Application of Magnetic Influence for the Measurement of Thickness of Rocks in Tunnelling, British Association Report,	1831
73. Extraordinary Effects of Lightning on the Packet Ship, <i>New York</i> , <i>ib.</i> ,	1833

74. On a Peculiar Source of Error in the Dipping Needle, ib.,	...	1833
75. On a New and Improved Compass Needle, ib.,	...	1836
76. On Improved Magnets and Methods for Determining their Powers, ib.,	...	1842
77. On the Circumstances which Affect the Power of Artificial Magnets, ib.,	...	1843
78. A New Process of Magnetic Manipulation, ib.,	...	1844
79. On Magnets Constructed of Cast Iron, ib.,	...	1844
80. On a Large Magnetic Machine of Enormous Powers, ib.,	...	1845
81. On a New and Powerful Mode of Magnetising Steel, ib.,	...	1846
82. On the Defects and Dangers of Correction by Magnets of the Local Attraction of Compasses in Iron Ships, ib.,	...	1847
83. On the Height, Breadth, and Velocity of the Higher Waves of the Atlantic, ib.,	...	1850
84. On the Surface-Temperature and Great Currents of the Atlantic, ib.,	...	1853
85. On Deep-Sea Soundings and Errors from Strata-Currents, ib.,	...	1853
86. On the Popular Notion of an Open Polar Sea,—Is it the Fact? ib.,	...	1853
87. On the Prevention of Railway Accidents by Collision, ib.,	...	1853
88. On the Loss of the <i>Tayleur</i> , and Changes in the Action of Compasses in Iron Ships, ib.,	...	1854
89. Inquiry into the Principles and Measures on which Safety in the Navigation of Iron Ships is to be looked for, ib.,	...	1854
90. On the Pictorial and Photo-Chromatic Impressions on the Retina of the Human Eye, ib.; On Optical Spectra, Magnetism of Iron Ships, &c., Journal of the Royal Society,	...	1853-4-5
Also a variety of Articles, Lectures, Addresses, Essays, Tracts, &c., in different <i>Theological, Scientific, and Literary Journals</i> .		
91. POSTHUMOUS WORK,—Edited by Archibald Smith, Esq., M.A., F.R.S.,—"Journal of a Voyage to Australia for Magnetical Research," Longmans,	...	1859

Dr. Scoresby was honoured by Diplomas from the following Distinguished Societies.

1. Wernerian Society,	...	1810
2. Royal Society of Edinburgh,	...	1819
3. Liverpool Royal Institution,	...	1820
4. Liverpool Literary and Philosophical Society,	...	1820
5. Manchester Literary and Philosophical Society,	...	1821
6. Whitby Literary and Philosophical Society,	...	1823
7. Hull Literary and Philosophical Society,	...	1823
8. Bristol Literary and Philosophical Society,	...	1824

9. Royal Society, London,	...	...	...	...	1824
10. Yorkshire Philosophical Society,	...	...	...	...	1826
11. Institute of France,	...	...	...	...	1827
12. Society of Arts in Scotland,	...	...	...	...	1827
13. British Association (original member),	...	...	...	...	1831
14. D.D., Queen's College, Cambridge,	...	...	...	...	1839
15. Société Française de Statistique,	...	...	...	...	1839
16. United Service Institution, London,	...	...	...	...	1841
17. Exeter Literary and Philosophical Society,	...	...	...	...	1842
18. Historical Society of New York,	...	...	...	...	1844
19. American Institute, Philadelphia,	...	...	...	...	1848
20. Philosophical Society of Leeds,	...	...	...	...	1848
21. Athenæum Club, London (honorary election),	...	...	...	...	1849
22. Leamington Literary and Philosophical Society,	...	...	...	...	1849
23. Natural History Society, Montreal,	...	...	...	...	1852
24. Mechanics' Institute, Melbourne,	...	...	...	...	1856
25. M.A., University of Melbourne (honorary),	...	...	...	...	1856

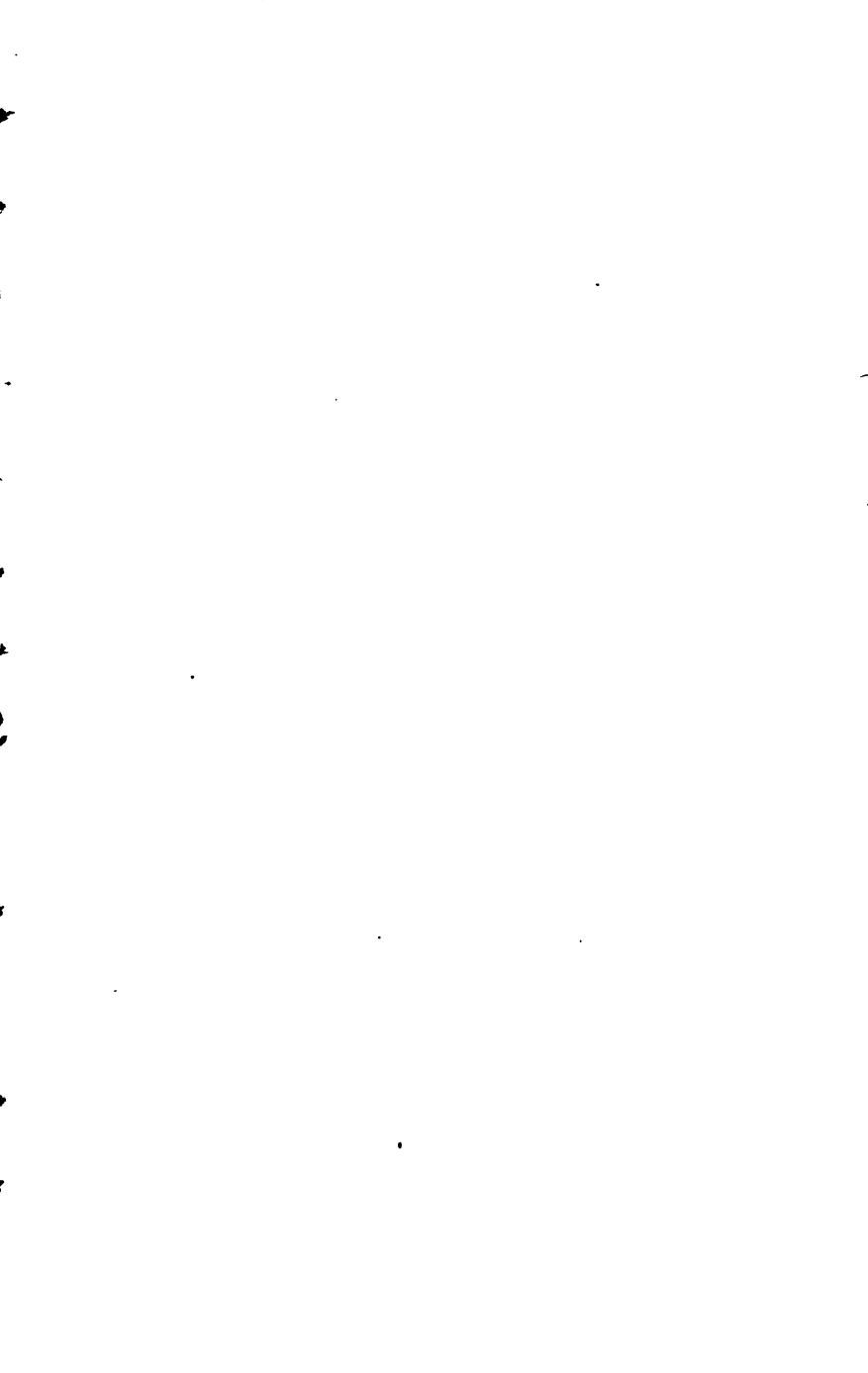
Museum Bequest.

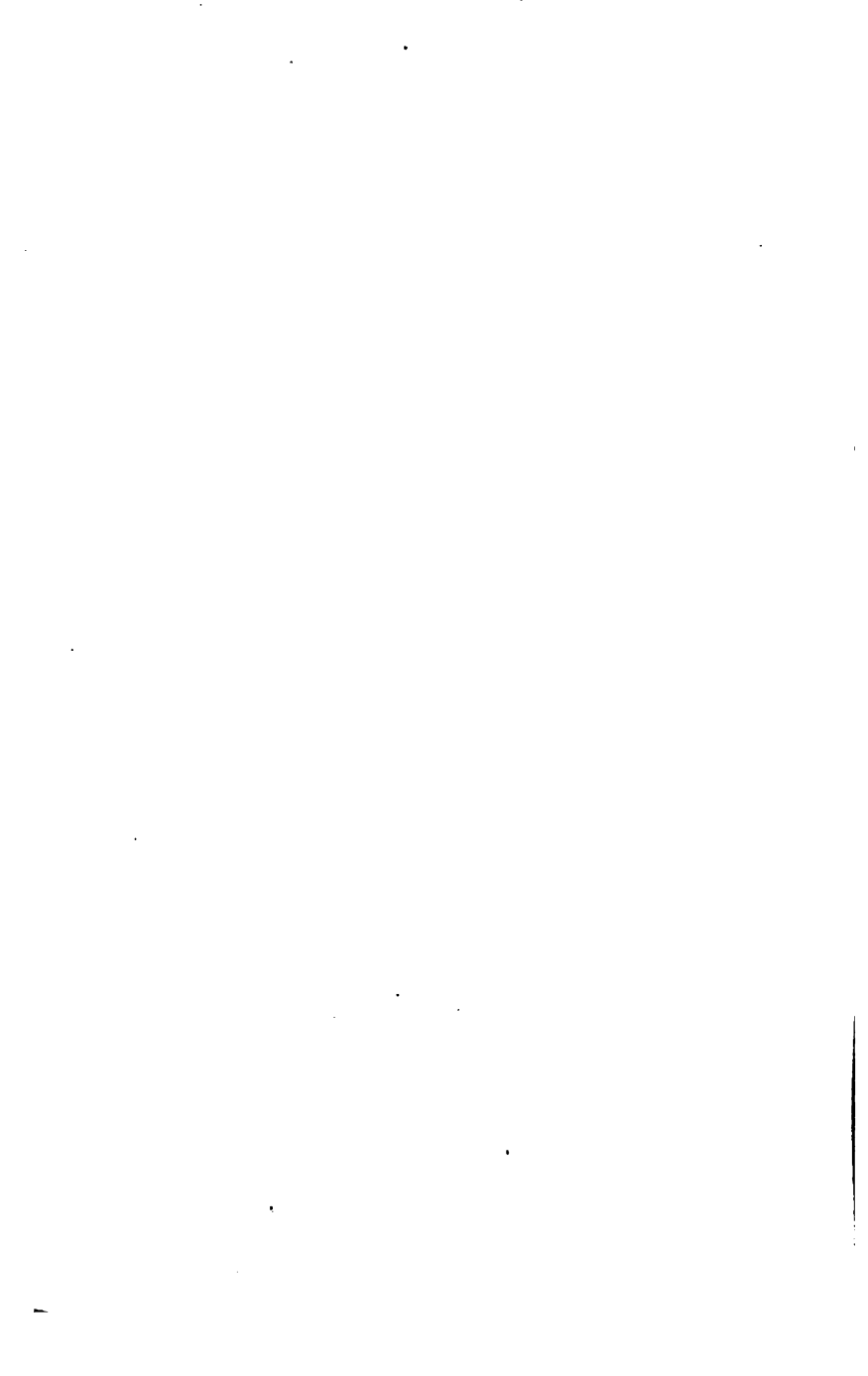
"I give unto my friends, John Chapman and Henry Simpson, Esquires, bankers of Whitby, as special trustees of this bequest, fifty pounds for the purchase of cabinets or otherwise for the benefit of any public museum at Whitby, the same being a freehold or equivalent in tenure to a freehold estate, and secured for a permanent occupancy as a public museum. *I give also* unto the said special trustees for the said museum the articles following, the same not to be taken out of the museum, except any of the instruments or specimens of natural history for temporary scientific illustrations; that is to say, my magnetimeter made by my own hands in brass; also my chronometrical compass, the interior apparatus being my own work; my compound four bar or plate magnetic needle (made by myself) in its long mahogany case; my Goliath compound bar magnets, with the apparatus thereunto belonging; my upright magnet suspending frame and apparatus; my largest horse-shoe magnet of nine bars made in Greenland, magnetised by my own process of percussion, and from whose sources the magnetism of all my other magnets has been derived; my compound Busk magnets, or hard plate magnets, comprising about one hundred and eighty plates in the two fasculi; my small five bar horse-shoe magnet, weighing about three pounds; my fifteen bar horse-shoe magnet, together with all the residue not otherwise appointed of my magnetic and my magneto-electric apparatus. *Also*, my specimens of Arctic birds, narwal, bears, and sea-horse heads, with tusks or horns of the narwal, anatomical preparations, whalebones, and other Arctic relics and curiosities; also Greenland and Spitzbergen plants (herbariums). *I likewise give* unto the said special trustees for the museum aforesaid, the following books, drawings, manuscripts, &c., namely, all my manuscript journals of voyages and travels, and original maps, drawings, and sketches illustrative thereof. All my

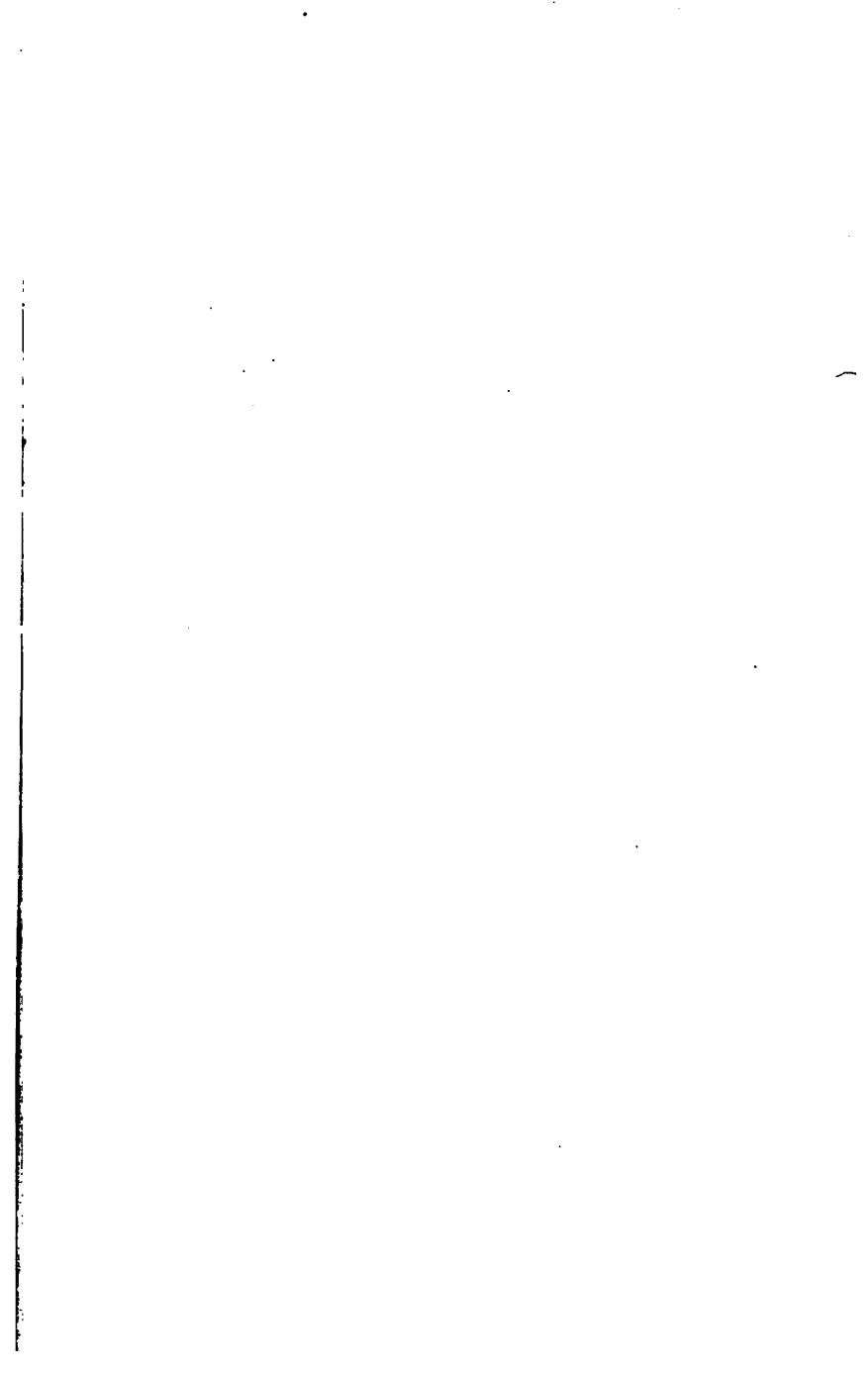
other scientific manuscripts, notes of experiments, and investigations; my autobiography and notes referring thereto; my original manuscripts of published works, manuscripts of literary, narrative, and biographic subjects; my select correspondence, comprising autographs of scientific, literary, or other distinguished correspondents, partly done up and partly in loose letters, being all or chiefly letters written to myself. A box of papers (chiefly MSS.) of parochial difficulties and painful controversies in Bradford parish. Also my best copies of my own published works, with German translation and reviews thereof. A cabinet or cabinets to be provided for all the above to be specially provided for out of the fifty pounds willed above for this bequest."

Also by Codicil.—"*In regard to the Museum Bequest*, I hereby add thereto, over and above what has been already appointed, the following,—I give unto the treasurer, for the time being, of the said museum of Whitby, the building being freehold or of equivalent tenure, the sum of two hundred and fifty pounds towards the liquidation of the debt on the building, or for other general purposes, such as shall be determined by the directors or trustees, the same to be paid before the general division noticed in section 6 of this codicil; that is to say, to be paid along with other legacies and bequests, or as soon as the terms of the before named museum bequest shall have been complied with, and the payment to be made out of such part of my personal estate as I can lawfully charge therewith."

M.P.
E.J.







**This book is under no circumstances to be
taken from the Building**

[illegible]

